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Cuba

Castro Tours Country, Addresses Nation

Immunology Research Center Tour

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[Video report on President Fidel Castro's tour of Havana's Immunology Research Center on opening day, 7 September]

[Text] Monday afternoon, 7 September, Commander in Chief Fidel Castro inaugurated the Immunology Research Center, located in the Siboney sector in Havana. This center is charged with conducting complex research work, and producing reagents and instruments for the health field, including the SUMA [Ultra Micro-analytic System] equipment, which considerably increases diagnostic capabilities, prevention of congenital abnormalities and serious diseases and directly increases medical services standards.

[Begin recording] [First speaker] We plan to follow the order of the center's operations. First, we will visit the methods development and reagent production area, then the area of instrument production development, and finally the instrument production area. [end recording]

Fidel toured the facilities accompanied by Dr Jose Luis Fernandez Yero, the center's director, and Dr Carlyle Guerra de Macedo, director of the Pan-American Health Organization.

[Begin recording] [First unidentified speaker] This is a laboratory where the diagnostic method is developed. That is, when there is a diagnostic problem, we have to try to develop a method that will solve that diagnostic problem. The comrades here learn about the problem and then attempt to develop a method that is adapted to our circumstances.

[Castro] Why don't you give a specific example, say hepatitis, AIDS, syphilis, some of the ones you can diagnose.

[First speaker] They have prepared a presentation of the entire work we have developed in the diagnosis of congenital hypothyroidism. Dr Robaina has some examples.

[Castro] [words indistinct] explained that, because you are working on the detection of other diseases.

[First speaker] Yes, in this laboratory there are some people from other centers who are working with us in the diagnosis of leprosy, for the study of some [words indistinct] early diagnosis.

[Castro] What is [words indistinct]

[First speaker] [words indistinct] indicators that could be used in the future for the diagnosis of some tumors at a very early stage.

[Castro] At a very early stage.

[First speaker] To use it as a general criteria to detect a tumor at an early stage in apparently healthy people.

[Second unidentified speaker] In the case of hypothyroidism, they have a substance that is produced by a gland and is found in very high levels in the blood. Therefore, we need to develop a system capable of detecting this substance. To do this, we first need to purify the substance using hypophyses from corpses. For example, we remove it and obtain a group of proteins—this substance is mixed with these proteins—and later we purify it, according to the specific characteristics these proteins have. This is a pattern obtained in one of these pieces of equipment of a complex of [words indistinct]

[Castro] What does this graphic mean?

[Second speaker] Each one of these correspond to a different protein and is identified by a different line in the graphic.

[Castro] Which would be the protein here in the case of hypothyroidism?

[Second speaker] It would be this one approximately.

[Castro] Is this normal here?

[Second speaker] No, this is the mixture which we use first. It is purified until an individual protein is finally obtained.

[Castro] What is the name of this one?

[Second speaker] That is the thyroid stimulating hormone. It is the one the comrades call TSH. Once the protein is purified, it is given to the comrades who work at the animal laboratory and they inject it into the animals and produce the appropriate antibodies.

[Castro] The antibodies.

[Second speaker] Once we have those antibodies, we verify their characteristics in terms of their purity—since the specific antibodies recognize in a heterogeneous mixture of different proteins only the protein that interests us. That is what allows us to develop a specific test.

[Castro] Well, you already have the serum, that is, the antibodies the sheep produce.

[Second speaker] Exactly.

[Castro] Do you inject it into the child? Do you get a piece of the umbilical cord?

[Second speaker] We draw a small amount of blood from the umbilical cord.

[Castro] From the umbilical cord. You do not touch the child.

[Second speaker] No.

[Castro] So you get the sample. Then, how does the antibody react when you mix it with the blood.

[Second speaker] Well, that antibody is used to specifically identify that thyroid stimulating hormone in the child which is high, if he suffers from hypothyroidism.

[Castro] What are the symptoms?

[Second speaker] In the child?

[Castro] Yes, in the child.

[Second speaker] The child does not show any symptoms. That is the problem...

[Castro, interrupting] No symptoms, but what does the blood test show?

[Second speaker] Oh, a high level of the hormone is seen.

[Castro] Why is that? If he has a deficiency?

[Second speaker] He has a deficiency in the gland that produces hormones which stimulate the maturation of the brain. Another gland, which has to take over the production of that gland, promotes and increases production of that other substance.

[Castro] And the high level is what indicates that he has a deficiency.

[Second speaker] Exactly, that he has the illness.

[Castro] So, when he is treated, what are consequences if he is not treated?

[Second speaker] The child grows to be mentally retarded, an idiot.

[Castro] I understand, according to the information I saw, that out of the 35,200 analyses you did, you discovered seven cases.

[Second speaker] Yes, [corrects himself] No, five.

[Castro] So, it is 1 out of 7,000 and not 1 out of 8,000 as you said.

[Second speaker] Yes.

[Castro] There are 5 out of every 35,000. What are the specific tasks you conduct? What do you develop here?

[Second speaker] Well, as Dr Fernandez Yero was saying, new diagnostic techniques are being developed.

[Castro] Of various diseases.

[Second speaker] Of various diseases, according to the specific need that may come up. Comrades from other places besides the center work here. This department does not have a permanent staff. All the comrades who conduct research in the center come here and also comrades from other institutions.

[Third unidentified speaker] Since the staff conducts research and production activities simultaneously, they conduct research tasks here and work on production at production laboratories.

[Third speaker] Commander, in this laboratory we are working on developing tests used mainly to assess vaccines and blood banks. For example, the comrades are working on developing a test for AIDS and there are several comrades from other institutions who are working in developing tests for the production of hyperimmune gamma globulin or specific treatment of certain illnesses. For example, the antitetanus. This will prevent ...

[Castro, interrupting] What do you do? Do you obtain a high level serum from a previously inoculated animal?

[Third speaker] We classify it at the blood bank.

[Castro] Yes.

[Third speaker] Because by testing all donors we can select...

[Castro, interrupting]... The blood that can be used to obtain gamma globulin.

[Third speaker] Exactly, without having to inoculate it specifically for that. We get it automatically.

[Castro] Why do some have more? Are there some that automatically have more antibodies?

[Third speaker] Depends on when it was inoculated. If it was inoculated a short time ago, it has a high level.

[Castro] So, that blood is the one used to obtain gamma globulin.

[Third speaker] That blood is processed...

[Castro, interrupting] And it is used against the disease.

[Third speaker] It is used to prevent the disease.

[Castro] Can people be saved with that gamma globulin?

[Third speaker] Yes, because the gamma globulin is used in individuals who have been bitten...

[Castro, interrupting] Of course.

[Third speaker] ...Who has not been inoculated. Thus, the disease is prevented in its first stage.

[Castro] So it is prevented in the person who has not been inoculated.

[Third speaker] The person who was not inoculated.

[Castro] Is it more complex if the person already contracted the disease?

[Third speaker] Yes, it is also used although it is more complex, of course.

[Castro] And what about using, for example, the hyperbaric chamber technique with low pressure?

[Third speaker] I do not have personal experience with the hyperbaric chamber.

[Castro, interrupting] ... and the oxygen technique? I believe those are treatments being used because that bacteria is anaerobic, isn't it?

[Third speaker] Yes, to stop the microorganism's growth.

[Castro, interrupting] And there are new oxygen treatments. Let's assume the person has contracted the disease and that he was not inoculated. Are you talking about tetanus or rabies?

[Third speaker] Either tetanus or rabies. We do work here for both of them.

[Castro] Correct. Let's assume the person has a disease. It is said it is difficult to treat it. It is very serious after it is caught.

[Third speaker] Yes, very serious.

[Castro] But, is this gamma globulin effective?

[Third speaker] Yes, the only thing that offers effective possibilities for treatment is the use of antibodies produced by a person.

[Castro] That is obtained from a person who has been inoculated and who has a high, high [rewords] many antibodies.

[Third speaker] Many antibodies.

[Castro] They inject the antibodies into the sick person.

[Third speaker] It is injected into the sick person. It is also very important in the prevention stage because usually a horse serum is used and sometimes this produces some negative reactions.

[Castro] Yes.

[Third speaker] In this way, by using human protein, that is, by using an antibody of human origin, the risks are avoided.

[Castro] What is the treatment used in rabies? Are they inoculated or do they receive this serum, the antibodies.

[Third speaker] In rabies...

[Castro, interrupting] Let's say, someone who was bitten by a dog with rabies.

[Third speaker] A set of inoculations is used. Many accidents happen and also many accidents with the antirabies serum.

[Castro] Because of allergies?

[Third speaker] Because of allergies to the proteins.

[Castro] What was it obtained from? From horses?

[Third speaker] It is obtained from horses for tetanus cases but it is obtained from rabbits and mice for rabies.

[Castro] From rabbits and mice.

[Third speaker] So, the person reacts...

[Castro, interrupting] This is the vaccine?

[Third speaker] The vaccine.

[Castro] But not the gamma globulin?

[Third speaker] Not the gamma globulin.

[Castro] But you say that you use gamma globulin initially, not only for tetanus but also for rabies?

[Third speaker] Also for rabies.

[Castro] What for? To combat, to boost the defenses?

[Third speaker] In the person who has been bitten by the animal...

[Castro, interrupting] Does it boost the defenses?

[Third speaker] Yes, and it also eliminates the microorganism in the first stage of growth. That is, since the person is infected in the first stage, the antibody kills the microorganism and prevents the disease.

[Castro] Can the disease be prevented with that alone or is it necessary to inoculate the person anyway.

[Third speaker] Vaccines are also used. The treatment for tetanus and in rabies includes inoculations.

[Castro, interrupting] How many days does it take to incubate the disease after the bite?

[Third speaker] I can't tell you exactly in rabies cases but the comrade can tell us. The comrade is from the Finlay [Hospital].

[Fourth unidentified speaker] Commander, it depends on the kind of virus.

[Castro] Are there several?

[Fourth speaker] Yes, there are several. There are some which can have an incubation period of up to 6 months. That is why initially the treatment—if it is thought that the animal that bit the person has the disease or if the animal bit the person close to the brain, that is, on the face...

[Castro, interrupting] Oh, because it spreads gradually?

[Fourth speaker] Yes, and the incubation period can vary. That is why it is suggested that treatment in that case begin by combining gamma globulin and vaccines. This is done so that gamma globulin can neutralize the virus and the vaccine stimulates the person's immune system and you get long-term immunology. So, if the source has delayed symptoms you are certain that the person is not going to have problems because when rabies symptoms appear it is deadly.

[Castro] When there are symptoms already it is very difficult.

[Fourth speaker] Yes, it is fatal, the person cannot be saved.

[Castro] There is no possible treatment?

[Fourth speaker] No, because it is a virus that attacks...

[Castro, interrupting] Have you heard about the hyperbaric chamber?

[Fourth speaker] Yes.

[Castro] Has it ever been used; has research been done with that?

[Fourth speaker] I do not know, Commander, because rabies is very well controlled here.

[Castro] There are no cases?

[Fourth speaker] There are no cases. We have no experience with it.

[Castro] You hardly ever have rabies cases.

[Fourth speaker] The important thing is that at this time the gamma globulin we have for emergency treatment is obtained from horses.

[Castro] With this technique you obtain [words indistinct]

[Fourth speaker] What we are trying to do with this is develop a fast technique because the usual one takes 14 days. It is done with animals, that is, the cost is very high from the point of view of...

[Castro, interrupting] Is it done with human blood, with donations?

[Fourth speaker] Yes, with donations.

[Castro] How long has this gamma globulin been used in treating rabies?

[Fourth speaker] Well, that has been established by the WHO. As I was explaining to you the gamma globulin which has been used up to now is obtained from horses and has the problem of accidents...

[Castro, interrupting] Has the other one been produced internationally?

[Fourth speaker] Yes, many countries produce it. Here, the comrades who work with blood by-products have produced two batches of that gamma globulin with our donations...

[Castro, interrupting] What are you going to do with the gamma globulin when you get it, since there are no rabies cases?

[Fourth speaker] For prevention, Commander.

[Fifth speaker] We do have cases of people who are bitten by animals.

[Fourth speaker] We do have to treat cases of people who have been bitten.

[Castro] Some people are bitten, for example, by [word indistinct]

[Fourth speaker] And also dogs that bite and cats that scratch.

[Castro] Cats.

[Fourth speaker] Yes, yes. The natural reservoirs are [words indistinct]

[Castro, interrupting] Use that one in the cases you get.

[Fourth speaker] Exactly, instead of using the one obtained from horses.

[Castro] Can that gamma globulin also be exported?

[Fourth speaker] Indeed, that is another possibility.

[Castro] Does it have a high price on the international market?

[Fourth speaker] The information we have is that in 1985 it cost $33.00 a dose.

[Castro] One dose.

[Fourth speaker] One dose. [music is heard]

[Fifth unidentified speaker] This laboratory has introduced in Havana the test to diagnose hypothyroidism and make prevention possible, that is, the test to detect the risk of allergies in newborns. The comrades have studied a large number of newborns in Havana with very good results. Once we complete that phase of work, we will know how the procedure works, and we will have experience so that we can apply it later in the rest of the country.

[Castro] You analyzed over 35,000 cases involving children from Havana.

[Fifth speaker] Children from Havana.

[Castro] During what period of time?

[Fifth speaker] Over a period of approximately 1 year, [corrects himself] approximately 1 and 1/2 years.

[Castro] It has to be 1 and 1/2 years because less than 35,000 children are born here.

[Fifth speaker] We began in February 1986.

[Castro] What do they do when the baby is born? What kind of procedure is followed? What do you do automatically in Havana—the same thing that is going to be done in the rest of the country? For both of them, hypothyroidism and allergies?

[Fifth speaker] When the baby is born, at the time of the delivery, when the umbilical cord is cut, a small amount of blood is taken from the umbilical cord, which is always thrown away. There is no need to inject the child specifically for that. So that small amount of blood is collected by all delivery rooms and they send them here now because the procedure is in the experimental stage. When they...

[Castro, interrupting] Do they send them here, this is where they are sent?

[Fifth speaker] Yes, in that small container.

[Castro] They are numbered.

[Fifth speaker] The number matches that of the patient.

[Castro] The patient's number. It comes here. So you do both tests?

[Fifth speaker] We perform both tests using the same blood sample.

[Castro] For hypothyroidism ...

[Fifth speaker] And allergies.

[Castro] And allergies. You discovered five cases. Approximately 1 in every 7,000.

[Fifth speaker] Every 7,000.

[Castro] You discovered many allergy cases.

[Fifth speaker] Yes, there are many more.

[Castro] With two possible cases, according to your report. There are a greater or lesser number of possibilities. You said 13 percent had...

[Fifth speaker, interrupting] Possibilities. Very probable. And practically 4.3 percent of the population had it for sure.

[Castro] Over 1,000, about 1,500 [words indistinct] 4.3 makes a total of 17.3.

[Fourth speaker] The test to quantify occurrence of allergies in newborns is based on the following: that there is a predisposition for the child to suffer from allergies. Treatment is given once allergies are detected in the blood and a telegram is sent so that the child is taken to allergy services, to the family doctor, or the polyclinic.

[Castro] What is recommended to him and why? What is recommended?

[Fourth speaker] An allergy test is given to see...

[Castro, interrupting] In that case the test is repeated.

[Fourth speaker] Yes, an allergy test is given to see what the child is allergic to based on the results we sent him. The test is given to see if there is a possible allergy or if there is a high possibility of becoming allergic. According to the type of allergy, the doctor determines the treatment. The high degree of susceptibility to allergies can be reduced and the child can become allergy-free or mildly allergic.

[Fifth speaker] In that case, excuse me.

[Castro] Do you want to explain it?

[Fifth speaker] Excuse me. I was saying that in that case what is basically recommended is a number of preventive measures. For example, the child's room should not have curtains that collect dust; it is suggested that the child avoid contact with domestic animals; and the introduction of foods to the child during the first months of his life should be done later than is the case with normal children. Although the allergy specialist could suggest these measures, we believe that the family doctor is in the position to implement them. When he goes the following week he can ask the mother: Why is this little dog still here if I told you that it should be somewhere else, or why have you not gotten rid of these curtains in the child's room?

[Castro] The tests show you that the child is potentially allergic, isn't that so?

[Fifth speaker] Exactly.

[Castro] Now, those allergies are different. Which symptoms could be shown? Asthma is one of them, but there could be others.

[Fifth speaker] It could be skin conditions which sometimes are confused with other kind of cases, it could be rhinitis, colds...

[Castro] Is asthma the most common one?

[Fifth speaker] Bronchial asthma, above all, is the one that concern us the most from the medical point of view.

[Sixth unidentified speaker] Also digestive conditions.

[Castro] It has been said that 10 percent—1 out of 10 more or less—suffer from asthma. I have heard that in general—this also happens in Japan—islands have a higher percentage of asthma cases. Could that also be due to dust, humidity, the environment, the seasons, winter and summer?

[Fifth speaker] In our country, the main cause is said to be dust in houses, dust in the environment.

[Castro] Why does the test you conduct tell you that there is potential for allergy. What shows up, antibodies? What type of antibodies show up?

[Fifth speaker] It is a specific type of antibody called immunohemoglobin E which is responsible for triggering allergic reactions.

[Castro] The child who is not potentially allergic does not have that... How do you call it?

[Fifth speaker] Immunohemoglobin E.

[Castro] Immunohemoglobin. The others do not have it. In that sense, the mother of the child who does not have it is at ease. After you test them you tell many that they are potentially allergic and put the others minds at ease.

[Fifth speaker] Exactly.

[Castro] What does it mean when it says here probably allergic? What does it mean, that it has a higher but not very high index?

[Fifth speaker] Above five, it is 13 percent. That is the cutoff mark.

[Castro] It could be six or seven.

[Fifth speaker] Exactly.

[Castro] Up to where does a probable allergic go.

[Fifth speaker] Above five.

[Castro] Up to where?

[Fifth speaker] Well, it could be 40 or 50.

[Castro] So where would be the one who is certainly allergic?

[Fifth speaker] Above 20.

[Castro] Oh, above 20. So someone who reaches a probably allergic mark is not probably allergic, he would be...

[Fifth speaker, interrupting] No, he would certainly be allergic.

[Castro] Certainly allergic.

[Fifth speaker] Exactly.

[Castro] So a probable allergic would rank between 5 and 20.

[Fifth speaker] Exactly. That one would receive primary services, that is, would be treated by a family doctor or at a polyclinic. If he ranked above 20 he would go directly to the allergy specialist.

[Castro, interrupting] So the others do not have to go to the allergy specialist. What can be done with a probable allergic. What measures should be taken?

[Fifth speaker] That person would be treated directly by the family doctor.

[Castro] But what measures will be taken?

[Fifth speaker] He is recommended the same measures.

[Fourth speaker] Breast feeding is also important.

[Castro] What is the importance of breast feeding in a case of probable allergy or certain allergy?

[Fifth speaker] Many of these children have the predisposition to get these kind of illnesses because cow's milk could have allergens, that is, substances that cause allergic reactions. However, this does not happen with the mother's milk. The amount of substances that can trigger allergic reactions in the mother's milk...

[Castro, interrupting] What is the advantage of breast feeding for a year? That they are strengthened, that they develop the ability of assimilating the mother's milk?

[Fifth speaker] There is a smaller chance of ingesting foreign substances, substances that can trigger allergic reactions.

[Castro] And what does he eat after he is 1 year old? If he gains a year, what advantages does he have?

[Fifth speaker] The possibility of these kinds of allergies appearing is delayed.

[Castro] His body is better prepared if it is delayed?

[Fifth speaker] Better prepared.

[Castro] What is the advantage? That he is better prepared. This means that one of these children who is breast fed for a year, can drink cow's milk when he is 3 years old?

[Fifth speaker] It is less likely that he will develop the illness.

[Castro] It is less likely afterwards.

[Fifth speaker] It is much less likely. It is less likely that the illness will develop in an older child.

[Castro] If he gained time. If he started to be breast fed, he is more likely to thrive.

[Fifth speaker] He is much less likely of developing an allergy.

[Castro] Can allergies remain latent without developing?

[Fifth speaker] Yes, it is possible.

[Fourth speaker] If the environment favors [words indistinct]

[Castro] I believe this is of great value. The test for hypothyroidism is very important because it discovers that one case among 7,000. It can comfort the family. But there are many cases of allergies. That is, there is a very high percentage—it is almost massive—of people with allergies. I consider this test to be a very important one. [music is heard]

[Seventh unidentified speaker] In the case of the alpha-fetal protein [alfafeto proteina], which is used to diagnose nervous system malformations and other congenital malformations, we obtain the alpha-fetal protein from the amniotic fluid of the pregnant woman. We purify the amniotic fluid of the pregnant woman and we inject the sheep with it. The sheep produces this antibody we have here. I purify it and attach it to the plastic slide.

[Castro] This little beaker down here is the plastic. [as heard]

[Seventh speaker] This little beaker is the plastic.

[Castro] You placed the alpha-fetal here.

[Seventh speaker] The antibody.

[Castro] The antibody, the antibody.

[Seventh speaker] The sheep's antibody.

[Castro] That is mixed with the serum, with the blood of the person.

[Seventh speaker] Not yet. I attached it to the slide.

[Castro] You attached it to the slide.

[Seventh speaker] I then add the patient's blood sample to the slide that already has the attached antibody.

[Castro] You add the sample.

[Seventh speaker] If the patient has a lot of alpha-fetal protein...

[Castro, interrupting] What happens?

[Seventh speaker] The alpha-fetal protein attaches here, as shown by this drawing, because the antibody traps it and does not let it go away. It is a trap. It attaches there and does not let it go away.

[Castro] And what happens then?

[Seventh speaker] Then I place the second antibody that has the bell. It has the [word indistinct] attached.

[Castro] Which is the second antibody.

[Seventh speaker] This one here.

[Castro] What is it called? It is also a sheep antibody but is processed differently in the laboratory.

[Castro] So that it attracts protein.

[Seventh speaker] Yes, so that it attracts it and makes a sound. It has a mark there.

[Castro] That is, so it has a contrast.

[Seventh speaker] A signal, yes. This is what I can measure in the SUMA.

[Castro] So, this measures the amount of protein? All should have a little protein?

[Seventh speaker] For example, all have a little in order to obtain the alpha-fetal protein.

[Castro] So, what does it mean if it is high?

[Seventh speaker] If it is high, it means there is a malformation.

[Castro] You measure the amount of...

[Seventh speaker, interrupting] Sure, there is a lot...

[Castro, interrupting] It is above normal.

[Seventh speaker] It is above normal.

[Castro] Is it very much above normal?

[Seventh speaker] In some cases, it is very much above normal. So here we have the SUMA, which is the equipment developed to enable us to run all these tests at the level...

[Castro, interrupting] It analyzes them and, at the same time, it automatically gives you the results.

[Seventh speaker] It has a computer inside.

[Castro] How long does it take to do all that you explained?

[Seventh speaker] It runs tests for 48 patients in less than a minute.

[Castro] So the machine works faster than you.

[Seventh speaker] Much faster.

[Castro] You took several minutes to explain this.

[Seventh speaker] It is more reliable than I am.

[Castro] And more reliable.

[Seventh speaker] I also make mistakes with the results and the machine does not make mistakes. [music heard]

[Fourth speaker] The first stage of our process is to purify immunogens, that is, the substances we are interested in measuring later.

[Castro] It can be antigens or antibodies, either of the two?

[Fourth speaker] Yes, in this case, the fundamental sources we use for the purification are the amniotic fluid, cord serum, and human serum. After we purify those immunogens, we inject them into animals.

[Castro] So, that is what you produce first?

[Fourth speaker] Exactly, that is what we do first so we can later inject it into animals. We later have immunization plans...

[Castro, interrupting] Rabbits and sheep.

[Fourth speaker] Rabbits or sheep, depending on the floating system.

[Castro] What happens later?

[Fourth speaker] Those animals will react to the substance we injected. After the reaction is at its peak, which takes place approximately 45 days after the cycle begins, we can begin to extract the plasma.

[Castro] How many times do you inject the substances you (?refined) in those 45 days?

[Fourth speaker] Some 15 times a year.

[Castro] And in the 45-day period?

[Fourth speaker] Six times.

[Castro] Six times.

[Fourth speaker] Four times during the 1st month, that is, once a week, and later the cycle is maintained.

[Castro] What do you extract, blood?

[Fourth speaker] We extract blood. That blood is processed in chromatographic columns that are here in these refrigerated chambers and we purify the antibodies, which are the substances we are interested in. After the antibodies are purified, they are titrated in the (?ultramicrolisat) with the ultra microanalytic system.

[Castro] That is, you analyze the amount it contains.

[Fourth speaker] Yes, we...

[Fifth speaker, interrupting] The SUMA is also used in the production process.

[Castro] The SUMA is also used in production.

[Fourth speaker] Yes, that is why we have...

[Castro, interrupting] Because it figures out the amount of antibodies it has, is that not true?

[Fourth speaker] It tells us the optimum concentration so we can later bottle it.

[Castro] Sure.

[Fourth speaker] After it is titrated, we put it through the lyophilization process, which we will later see in the department. After it is lyophilized, we titrate it again, before bottling and labeling it...

[Castro, interrupting] So, you first manufacture a certain amount before you bottle it.

[Fourth speaker] Yes, we titrate it first and once we are certain that the product is adequate...

[Castro, interrupting] You lyophilize it.

[Fourth speaker] We lyophilize to preserve it...

[Castro, interrupting] You analyze it again?

[Fourth speaker] Exactly. We then bottle it. We have 41 production lines under those conditions. We should process 82,200 bottles of the reagent, as finished product. Everything we have produced up until this month—that is since we began the program—those finished 459,000 alpha-fetal proteins you saw, if we had had to buy those reagents, they would have cost the country 3,473,000 [currency not specified].

[Castro] [Words indistinct] And what are the other TSH?

[Fourth speaker] The 35,200 TSH reagents ...

[Castro] Oh, the ones for allergies.

[Fourth speaker] They are 262,000.

[Castro] No, that is for hypothyroidism.

[Fourth speaker] That is for congenital hypothyroidism and this one is for allergies.

[Castro] Allergies.

[Fourth speaker] Of course, prices are lower because the amount is less.

[Castro] And those 190,000?

[Fourth speaker] These are finished immunoglobulins, that is, IGM, IGG, and GA, which are produced.

[Castro] If we have had imported it, it would have cost us $4,260 million? [Fourth speaker] Exactly. And it maintains quality control. It guarantees that the same amount is placed in every bottle. That enables us to produce large number of bottles and automatize the system. After they are bottled, we take them to be lyophilized at the next laboratory we are going to see now.

[Castro] How is the lyophilization process?

[Fourth speaker] The product goes from this state to solid. And from solid...

[Castro, interrupting] It is made solid first.

[Fourth speaker] Yes.

[Castro] By freezing.

[Fourth speaker] Yes, freezing it and later it is turned into a gas through the process of sublimation.

[Castro] Through what?

[Fourth speaker] Sublimation.

[Castro] Sublimation, but how does that happen?

[Fifth speaker] The machine turns it first to ice.

[Castro] To ice.

[Fifth speaker] It takes out the vapor and takes out all the water and turns it into powder.

[Castro] How can you take out the vapor from ice? All my life I have thought that the steam results by heating water.

[Fourth speaker] Because it is frozen in a vacuum.

[Fifth speaker] It is done in a very tight vacuum.

[Castro] It is the vacuum...

[Fourth speaker, interrupting] The vacuum and low temperatures...

[Castro] What takes out the ice from smoke, [corrects himself] that is, humidity from ice.

[Fifth speaker] Yes, the vacuum takes it out.

[Castro] Without melting the ice?

[Fifth speaker] Without melting it.

[Fourth speaker] Without melting it.

[Castro] And this is what is left.

[Fourth speaker] This is what we get. It is later heated and...

[Castro, interrupting] What is the advantage of freezing it?

[Fourth speaker] There are many. First, it is much more stable. It is easier to transport it since it does not have to be freezed. In addition, the stability of the product is much greater. It can be stored up to 4 years under those conditions.

[Castro] Four years in a refrigerator or...

[Fourth speaker, interrupting] Under normal refrigeration. It does not need special refrigeration.

[Fifth speaker] In a home refrigerator.

[Castro] In a normal refrigerator. And that one, how long does it last?

[Fourth speaker] This has to be frozen at -70 or -20 degrees.

[Castro] So it does not spoil.

[Fourth speaker] So it does not spoil. In addition, thermos jugs or other refrigeration products are needed to transport this.

[Fifth speaker] These two comrades work in this department, which is where materials are scrubbed and sterilized. When they are not working here they help in the center's dining room and also clean, when it is necessary. Today they are with us as part of security. So they do many things.

[Castro] They do many things.

[Fifth speaker] People who work in biology say scrubbing is the heart of a work center. We say this is the heart and the stomach because they also help us at the dining room. [laughs]

[Castro] Very well.

[Fourth speaker] [sounds of animals heard in the background] These animals are used for the reagents from the immunogens we get from the production department. Currently, we have 36 animals. [corrects herself] That is, there is room for 36 animals. Currently, we have 18 which will begin to be exploited. We plan to test all the immunogens we get from the production department to obtain reagents.

[Castro] What breed do you have?

[Fourth speaker] Currently, we have two breeds. We have red-tan domestic, a Cuban domestic breed, and we have the Suffolk Ram, which is this one. Here we immunize the animals with TCH [expansion unknown] and it is said that an animal who has been immunized with TCH and has adequate levels of antibodies cost up to 50,000 pesos.

[Castro] How long is one of these sheep expected to live?

[Fourth speaker] Between 7 and 8 years.

[Castro] Do they live longer than regular sheep or do regular sheep live longer?

[Fourth speaker] No, regular sheep live longer, that is...

[Castro,interrupting] Do you draw blood from these sheep many times a year [Fourth speaker] Yes, we draw blood 12 times a year. We draw 1 liter of blood a month.

[Castro] How can the animal survive after drawing 1 liter of blood?

[Fourth speaker] We use the plasmapheresis technique. This technique is used in humans. We apply it to animals. It consists of drawing the blood and later reinjecting the red blood cells.

[Castro] How do you do that?

[Fourth speaker] We can go to the other room to ...

[Castro, interrupting] You draw blood but where do you get the red blood cells?

[Fifth speaker] We reinject the red blood cells of the same animal, we only use the serum.

[Castro] I did not know that.

[Fifth speaker] We put back their red blood cells so that they do not become anemic.

[Fourth speaker] We bring the animal here.

[Castro] What do you do, do you tie it, what do you do to it?

[Fourth speaker] We weigh it and anesthetize it.

[Castro] Oh, you anesthetize it to draw blood?

[Fourth speaker] To draw blood.

[Castro] So they are completely anesthetized?

[Fourth speaker] They are completely anesthetized.

[Castro] How do you anesthetize them, with an injection?

[Fourth speaker] Yes, we inject them with (Rompun).

[Castro] How long is the animal anesthetized?

[Fourth speaker] From 2 to 5 hours.

[Castro] So, you draw blood and get the serum. How long does it take to put back the red blood cells?

[Fourth speaker] The process should last between 20 to 25 minutes.

[Castro] How many do you do in a day?

[Fourth speaker] We are planning to do this to two animals a day. The room should have 36 animals and we would do two.

[Castro] A maximum of two.

[Fourth speaker] The entire procedure would last approximately 2 hours because we use two bags, commander, to draw 250 [as heard] each. The process is done in two steps.

[Castro] Oh, two bags of how much?

[Fourth speaker] Two bags of 500 milliliters of blood.

[Castro] One after the other later. How many liters of blood does the animal have?

[Fourth speaker] Sheep have approximately 70 milliliters of blood per kilo.

[Fifth speaker] It varies according to the size of the animal.

[Castro] It can have two or three liters.

[Fourth speaker] No, it has more. It has between seven and eight liters of blood. [music is heard]

[Fifth speaker] We want you to see how the lathe works by making a part yourself.

[Castro] Well, if I was talked into operating a bulldozer [preceding word in English] yesterday, what is it to push a button?

[Fifth speaker] This is the raw material, which is a brass strip.

[Castro] Yes.

[Fifth speaker] Now, let's see what happens after you push the button.

[Castro] Which button do I have to push?

[Fifth speaker] Only the green one.

[Castro] The one that says one?

[Fifth speaker] The green one and wait for 2 minutes.

[Castro] But do I push it for 2 minutes?

[Fifth speaker] No, you only push hard once. Now. Now the part is [words indistinct]. It has a small [word indistinct] that it is eliminated later manually.

[Castro] It is not hot.

[Fifth speaker] No, it has a forced (?cooling) system.

[Castro] I thought it would be hot. What part is this?

[Fifth speaker] Here we make the slides used to place the reagents, to put all samples. [Passage indistinct] They are computer operated.

[Castro] Oh, that is to make the slides. What material are they made of?

[Fifth speaker] Here we also make the slides that support the other slides.

[Castro] But that is not the one you put there.

[Fifth speaker] This one is made of Plexiglas, of plastic.

[Guerra] How many—in percentage terms—(?steel components) do you produce here?

[Fifth speaker] In the mechanical part?

[Guerra] Yes.

[Fifth speaker] All of them.

[Guerra] The only things you import are the electronic parts.

[Fifth speaker] We import some electronic components. This is where the equipment is assembled. Here we have a display of the equipment with the [words indistinct] that are built in the department. The mechanical parts are assembled. They have already been manufactured. They begin to be assembled from the base until they are completed.

[Castro] What you are doing here is assembling.

[Fifth speaker] The equipment is assembled here.

[Castro] The equipment is being assembled.

[Fifth speaker] Mechanical, optical, and electronic parts arrive here and all the entire equipment is assembled here. [music is heard] The SUMA equipment cards are installed in this room. After receiving the cards, which are manufactured by a Santa Clara enterprise, we install and test them according to their design. We perform electrical tests and they are ready to be installed in the

equipment. At this time we are collecting the first cards of the equipment we are going to produce this year. [music is heard] This is the machine that sounded like a plane. This is where we manufacture all plastic accessories that are used in the laboratories to prepare the samples, the reagents. There are quite a few. You can see all of those. In this department we develop and produce. That is, this is a research and production department. Here we do the research and assembly and here we build the SUMA's reading plate [placa]. This a high precision work. This is the raw material. We later cover it to protect the glass before it is cut. The ridge is cut first one way and later it is cut in two ways. This is the finished plate.

[Castro] The small holes are done later.

[Fifth speaker] No, this is the raw material.

[Castro] Don't you later cut the holes?

[Fifth speaker] All the cuts are done here.

[Castro] You cut them later.

[Fifth speaker] No, this is the procedure, look.

[Castro] Oh, this is already finished.

[Fifth speaker] That is already finished.

[Castro] And the other ones that have a... [changes thought] this one is for reading.

[Fifth speaker] This is where the results are read from. This is the plate that is placed inside the SUMA to read the results.

[Castro] Oh, I understand now.

[Fifth speaker] We do this with a machine controlled by a computer. The comrade has worked in the center for many years. She has experience in important optical projects and had a lot of responsibilities so she was able to assimilate the technology right away.

[Castro] I am very glad, I congratulate you.

[Fourth speaker] Thank you.

[Fifth speaker] On this map we have the location of all the laboratories that are already operating in the country.

[Castro] There are 14, aren't there?

[Fifth speaker] We have 14 laboratories. We have three in Havana, one in Pinar del Rio, one in Havana Province and Matanzas. The only provinces that do not have any yet—and they are going to open this year—are Ciego de Avila and Las Tunas.

[Castro] Those are immunochemical laboratories.

[Fifth speaker] Immunochemical laboratories that have SUMA equipment operating. We have also marked all the places where the programs are being developed. The entire population of pregnant women in the country is being given the alpha-fetal protein test to diagnose congenital malformations. In Havana we have TCH and GE [expansion unknown], but beginning this month we are going to expand it to five provinces and to the rest of the country before the end of the year.

[Castro] For hyperthyroidism and allergies.

[Fifth speaker] Here we have some results of the samples that have been studied since we began in 1982 until July 1987. At this time, 378,423 pregnant women have been tested with the alpha-fetal protein test to diagnose congenital malformations. These have been the results. When we analyzed the results this year it caught our attention that in June 1981 we made the commitment with you to study 10,000 pregnant women to see if the test was good, and this year over 10,000 pregnant women a month have been tested with the system. In June we had a high of 16,000 pregnant women who were tested.

[Castro] For these three programs alone we will have to conduct some 300,000 tests a year when we have these three tests.

[Fifth speaker] Yes, there should be approximately 160,000 for each test. That is the number of births we have every (?year).

[Castro] For each test? So...

[Fifth speaker, interrupting] Because we have to test the pregnant woman and later have to run two tests on the newborn.

[Castro] Yes, there would be 480,000 as long as we do this.

[Fifth speaker] As long as we do this.

[Castro] Because later we have all the laboratory analyses.

[Fifth speaker] Currently, 11 clinical laboratory tests are run in the entire network.

[Castro] How many SUMA's do you estimate we need for the known programs so far?

[Fifth speaker] Some 200 for the entire country. Between 200 and 250 for the entire country.

[Castro] Some 250. How long would it take to train the staff for that?

[Fifth speaker] Approximately 3 years.

[Castro] Some 3 years. Does this mean we are using them in laboratories?

[Fifth speaker] Yes, they are being used.

[Castro] In clinical analyses and everything.

[Fifth speaker] Eleven clinical laboratory analyses are performed. The entire clinical laboratory work is performed in the same place where a SUMA is installed with a considerable degree of reliability. In this department...

[Castro, interrupting] We would need the production of 2 years, but we need to consider the idea of beginning to open the market for a part of it while we train the staff. We have to see what percentage... [changes thought] because we have another factory—it is not a research center—that can manufacture this equipment. It could be. All depends on the demand of socialist countries for this equipment. It is an enormous market. If we need 200—he was talking about 200 to 250. There are constant new uses. We don't know what the future of this technique in research is going to be.

[Fifth speaker] In this department we also control the quality of the work of the laboratories. We send samples of unknown value to laboratories and we analyze the results they send and also analyze the results of their internal control results.

[Castro] What type of communications are you going to have with them, over the phone?

[Fifth speaker] Here we have telex and we have...

[Castro, interrupting] And they send you the computer data?

[Fifth speaker] They send the data over the phone. The computers are linked with the phone lines. We also receive the information over telex and through computers.

[Castro] How many people work here, one?

[Fifth speaker] One, for now.

[Castro] And later two.

[Fifth speaker] And later two.

[Castro] What is this laboratory called? Say, what is this control center called?

[Fifth speaker] We call it a national program. Maybe someday we will have to call it an international program.

[Castro] So, this is the control center of the immunochemical national program.

[Fifth speaker] Very well. It is admirable because there is something very important. The way the center is organized [is admirable] considering the number of workers it has with many assignments and irregular working schedules. The productivity it has is very important. You are going to produce million of pesos in equipment here, million of pesos in reagents, and are also going to conduct research. I should say, you are going to conduct research and, on top of that, you are going to produce million of pesos in equipment and million of pesos in reagents. [music is heard] [end recording]

Minibrigade Anniversary Address

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[Speech by President Fidel Castro at the ceremony marking the 1st anniversary of the renewal of the minibrigade movement in Havana's Karl Marx Theater on 30 September—recorded]

[Text] [Applause] Comrades of the minibrigades, a year ago we met here to talk about something that was virtually only an idea. That was when the first minibrigades were regrouping in our capital. Today we can attend this ceremony with a brief but rich history of efforts, achievements, and successes. The minibrigades have reappeared in great strength; we could say they are much stronger than when this movement began. Now there is a better organization with better ideas, better plans, and even better distribution of all efforts. In the past, the minibrigades worked in only a few places, in a few areas needing development, but now the minibrigades are working in Havana's 15 municipalities.

The minibrigades are now also carrying out a systematic social work plan of great importance for our population. Among the new ideas, I can mention that all houses are no longer being directly distributed to those who work in factories. Some comrades had doubts at times. We have explained this, and we have asked some comrades to explain this as much as necessary. This is not really a sacrifice by the movement; it is not a sacrifice by workers. We may need a little more time to satisfy 100 percent of the factories' needs because all homes are not being turned over to the factories. I call this a fair measure, because there is a great demand for housing in sectors that are unable to form minibrigades, including those sectors whose work interests us so much that it is not proper for them to join minibrigades; for example, those enterprises involved in housing projects.

We recently met with one of the most important housing enterprises to ask them to work 10-,12-,or 14-hour days—whatever is necessary—because the construction surge is creating a huge demand for projects. It is obvious that it is not appropriate for us to have engineers, architects, and draftsmen doing construction work.

There is also the case of the health workers. There are those who work in the gardens, in the service areas. There are many nurses and doctors. It is possible that a given hospital could organize a minibrigade because of its large staff, but undoubtedly it is not suitable for us to ask health workers to do construction work. I have seen doctors doing construction work, but it has been as a result of a request from the party.

I recently observed the activities at the Salvador Allende [Hospital] of many of the minibrigade workers who are receiving awards here today, and I found a doctor, a surgeon, was doing construction work there. I asked him: What are you doing here? He answered: I am a hod carrier for a carpenter here. He was very happy. I said to him: I imagine you are taking care of your hands. He answered: Yes, I am using gloves. I asked him to explain to me how he had ended up doing that kind of work. He said this was a job he was doing on behalf of the party and on behalf of the communist youth because they want to help build this hospital. As a militant I was mobilized, he said. We all want to participate, he said.

This is not the case of a contingent of doctors building houses or doing some social work. This is the case of a communist militant who cannot stand being left out of efforts being made by others and who was sent for 1 month to work as a hod carrier, like any other worker. I am happy for him. Perhaps getting away from his everyday work will even do him good. He is doing physical work. This is not the case of committing the error of taking him out of the operating room to do this work for 1 year or 1 month.

I believe the change in work can be healthy because of the moral satisfaction it provides. Morally speaking, it is a great lesson and very encouraging for the carpenter who sees that his helper is a surgeon who works 10 hours a day. There was another doctor there. His work was political in nature; this is what he does to satisfy his duties as a party militant.

Unquestionably, it is not convenient for us to pull hundreds of doctors or nurses away from their hospital duties. This is also true for teachers. I am now citing some cases. The teachers are [4 second break in reception] For example, it would be difficult to organize minibrigades using day care workers. There are women's minibrigades, but if we have a [2 second break in reception] the effort the women are putting forth, it could be done. But what we are doing in the day-care centers is trying to reduce the payroll while leaving the indispensable personnel to provide good care for the children. It is more difficult to organize the women of this profession in that activity. By the same token, I have tried to organize the handicapped; they are needed. There are other things. There are groups of workers who are doing such intensive and necessary work that it is not convenient for us to pull them out for the minibrigades. For instance, yesterday I visited a new contingent that in fact is not represented here—the ceremony's organizers forgot about this group because it is not building homes but is building an avenue that is of enormous value for the city. These are people who [words indistinct] with all of their new machines. All of them are militants of the party youth who are going to be working 12 to 14 hours a day. They are undertaking very important work for the city. So we may exercise options in minibrigade personnel, if we so desire, with those workers who are also in need of housing, if they keep on working. It is a new nucleus. If we have some housing we can look at the more critical cases and assign housing to those workers. This case is an exception, but it can happen. Above all we need housing each time we begin a construction project. Now we are expanding the avenue that goes through Ciudad Libertad, which, as you know, leads to Finlay Hospital and stops there; Havana has no avenue to the west. Now, we have now gone a little beyond the Obelisk, there is a turn [1 second break in reception], a four-way street is being built, it passes in front of the Zenith, and flows into the Mediodia Freeway—I think that is the name of the freeway that passes through that area—and later connects with the Western Freeway.

Some 140 houses had to be found there because a whole suburb had to be moved, including those people living on the land where the freeway was going to be built. We needed space for the Miguel Henriquez Hospital because there was only a tiny yard, almost the size of this, even less than this, less than the lower floor of this building, and I do not know how many things had to be built there. The hospital needed some colossal dimensions so areas had to be found. We were able to vacate 3 blocks, but it was necessary to find between 100 and 150 houses, to be able to immediately begin building that hospital, which is to triple in size in order to serve hundreds of thousands of people.

This same freeway, this avenue within the city, from 100th Street, will reach the national freeway. A few houses will have to be demolished now, but when it reaches the railroad tracks, after 100th Street and after Vento Street there are a number of obstacles. And I was telling the party comrades to look at the project quickly, because we have only 6 km left from an original project of 10 km. When it is over...[changes thought] because it is going full steam ahead, that force, that group recruited by the party, they are going to work from 100th Street and the Western Freeway, but afterward they are going to work between 100th Street and the National Freeway. There are many obstacles, some of them belonging to the state, some private. I tell them to look at each case separately so they do not have to be delayed and so solutions may be found. We need hundreds of houses. We need to solve the capital's street problems, and so on.

When a day-care center, school, or a building has to be built, or when one must demolish something to build later, we need houses. We need many houses. But, not only in these cases: Thousands of houses might be needed, because we may need many day-care centers, schools, or polyclinics. Afterward there will be other

installations. The state needs to have a supply of houses. But we can also have handicapped persons, we can also have elderly people who are facing critical housing conditions, and we may be able to improve their conditions. We have also made provisions for them. Actually, nothing is being taken away from anyone, because the factory pays the salaries but the state returns all the money to the factory. So the factory does not pay a cent. The collective, however, benefits. The state supplies the materials, the equipment, and the divisions of land. The state supplies everything, including the salary paid to the minibrigade. Of course the minibrigades also contribute. They contribute with their overtime hours and their extra efforts, because undoubtedly the minibrigade worker works much more, but I think it will be a satisfaction to him to know that he is perhaps building a home for a teacher, a doctor, an architect, a handicapped person, or for those sectors of the country that need homes. It is fair and appropriate for the country that the house be given to them.

Just as when they build a day-care center, they are probably not building it for their own kids, they are building it for other citizens' children. They are building a special school, and a working family is going to benefit. I think it must be a source of satisfaction to anyone that the workers' families will receive all these services. Only if this is not well clarified, will there be some misunderstanding.

The state also has other housing units because the state has the enterprises union— it also has the popular power—but we had to send the minibrigades there and also give them a percentage because there was a shortage of workers. Anyway, we will attempt to get some professional workers to build houses for the enterprises union to have a few more houses for the state, not only the allotted percentage. From the beginning this has been applied to the social minibrigades. But there is something else, the Julio Diaz contingent: The workers who want to build and are building an additional building after putting in a 14-hour day. That is also included in the minibrigade principle. So no group is excluded.

Of course, when it comes to distribution, the state, the popular power, the party in Havana can say we are going to give a little bit more to the minibrigade that worked over 14 hours.

But they made their proposal under the same principles, and they are going to build a 48-apartment building. They did not say: No, we are not going to work over 14 hours to build a building, and we want 100 percent. None of them said that.

So we are working with the same attitude. I think it is good because this educates and helps and develops solidarity, because this is not going to be privileged housing, and because at any factory only outstanding and meritorious workers get minibrigade housing. Moreover, a certain distortion of the minibrigade principle had been created, because at the factory a house was practically given to those who had worked in the minibrigade. Once in a while you would find an engineer saying that he would like to join the minibrigade so he could get a house. There are certain workers who, because of their specialties, should stay in their current jobs. I remember when the minibrigade principle was established, the criterion was that houses were distributed by the factory. Of course, working is meritorious, but we cannot accept the principle that a highly specialized worker who should not leave the factory for 1, 1-1/2 or 2 years because of his specialty cannot receive a house from the factory. Otherwise we have distorted the connection between the minibrigade principle and the minibrigade distribution. It is important to remember that there are many who are going to need housing within the next few years. There may even be some from the same factory, or someone who has been transferred, or an engineer. I found an engineer from a MINICOM [Ministry of Communications] brigade who is living in very poor conditions and had done brilliant work as a brigade chief. I knew that the man wanted to join a minibrigade and planned to request to do so as soon as he finished a job he was doing. He was the architect, the brigade chief. Logically the state must resolve this man's problem if he is a good construction brigade chief who leads a 700-800 man brigade and is doing a great job. It is good if the party can tell him: No, comrade, here is your house. Carry on. So that this man can see he is being treated with consideration. Therefore, we want the state to have a few more houses, those that are built by professional workers enterprises, as was historically done. So that if 5,000 houses are assigned this way, they can have 2000 or 3,000 more the other way. Then if there is a surplus at any time, the rules could be changed. But I doubt there will be any left over, at least within the next few years because the accumulated needs are enormous, and we not only have to fulfill needs, but we also need to address all of the examples I have given you. We do not even know the future plans for all the grammar schools we want to build. At the National Assembly we were already discussing the need to institute two shifts at the high schools. If we estimate that we have around 100,000 teenagers who are attending a single shift, and there is no one to control them because the parents are both working, we must consider implementing two shifts. So, is it necessary to make two-shift high schools? How many will we have to build? Maybe 100, maybe 120. We may also have to build elementary schools because on occasion we have had to find houses and turn them into schools. How many schools do we have to build in the capital, between elementary and high schools? I believe we have to build no less than 200, no less. When we build in central Havana and in all those places where there is no space, we will have to demolish to make space. The idea is not to build a skyscraper in 1,000 square meters. Space is needed for a building that is adequate for a school and for a recreation area for the kids to play some volleyball. I am not saying baseball, but at least a small

volleyball court, a small basketball court, or something similar. In the projects we will build even the roofs will have to serve a useful purpose.

But perhaps we will need a quarter, a third, or half of a block to build one of those schools. When the time comes to build the olympic-size swimming pools we will start next year already...[changes thought] by olympic I mean the swimming pool complexes and sports and recreation institutions at certain times of the year. Here it will be the same; we will need one block. Of course the city has many blocks; the city encompasses hundreds of square kilometers. The city has tens of thousands of blocks. The world is not coming to an end if we allocate 30, 40, or 50 [blocks to build] these types of sports installations. But sometimes we will have to search for them just as we had to find space for the Miguel Henriquez Hospital. We could build them in the areas of Cerro, 10 de Octubre, Central Havana—I am not going to say Havana Vieja because that is unthinkable. I do not know where we are going to build the swimming pools in Havana Vieja. We would have to build them behind one of the walls, or behind the facades [laughter]. They will have to be built in a certain way in Havana Vieja because this part of the city has very important historic value [1 second break in transmission] economic, there are many visitors, many tourists.

[Words indistinct] this is a heritage of humanity. We can't bring bulldozers there [works indistinct] and even built the Ministry of Education, which we had decided to move and build elsewhere so that we could rebuild the old university that existed there once, one of the oldest in America. [Words indistinct] an office building and everything was demolished. That is behind the city museum. Some day we will have to build that back up again [words indistinct] that is civilization, that is development, that is progress.

And we, what do we have to do? We have much to do, but I do not lose hope that some day we may rebuild those buildings. But there are many streets in central Havana where one walks among buildings built in 1905, 1910, and so on. Many people like this. I know many people want the buildings in central Havana to be renovated. The buildings are holding up, but their sturdiness remains to be seen. What type of standards were there in the 1st years of the Republic? How many steel rods did they use? How much cement did they use? What type of structure? It would not be a surprise if one of these buildings collapses and kills people. Many people live there, and many houses have been renovated. Critical situations might arise, which is why society—in this case, the province's popular power, the province's party—has to have a housing fund for all of these problems, and which is why we try to have a little over 50 percent of the ones under construction built by those professional enterprises.

This is an immediate need, and I want to take this occasion to explain it and to explain the principle that it is not necessary to be part of the minibrigade. Some work centers may have serious, capable, indispensable workers who merit having a house. That is why I took this occasion to explain this in view of the new concepts. I am referring to the misunderstanding that one must be a member of the minibrigade to get a house. That is a deviation, a deformity of the initial purpose of the minibrigades. It is good to remember and stress this point. The workers themselves are the ones who distribute the houses at the center. No one dictates to them concerning to whom the house should go. It is the workers themselves, and they must remember that. Do not let the principle become distorted or deformed. The minibrigades work for their collective, for their work center; and it is not indispensable to be in the minibrigade of that work center to receive a house. One must, of course, be a meritorious, respected worker whose job is indispensable to the work center. Remember that the minibrigade principle was born out of work done after hours. But the work after hours was almost null because really there was a surplus of workers at the factories. This happens in almost all work centers.

I said recently that if we were to take 1 out of every 8 workers, we could mobilize 100,000 workers. Actually, we cannot do it because we do not have enough material to mobilize 100,000 workers. It has also been explained that if we were to mobilize tens of thousands of workers after the regular work hours, we would not have enough materials. We do not have enough materials for all the people we could mobilize in this capital.

Thanks to our revolutionary way of moving masses, we could mobilize whatever forces are necessary, not only to build a new Havana, as I said on 26 July, but also a new Paris, a new London. We could do this if the matter were only one of manpower. Our limitations are in the other fields, not in resources of energy and force. A fundamental principle is coming to fruition, and the capital will be able to resolve its housing and social problems with its own resources.

We have manpower, much manpower in the countryside. There is the Miguel Henriquez Hospital—well, not the Miguel Henriquez, but the Pediatric Hospital of Marianao—where many people from Holguin work; they also work at the Salvador Allende Hospital and at the school [not further identified]. There are many workers from Las Tunas; at the Frank Pais Orthopedics Hospital, there are workers from Guantanamo and Sancti Spiritus, I believe; at the Tropical Medicine center,in western part of the capital, there are many workers from Oriente. [noise from the crowd] Oh, I am mistaken: Those workers are from Pinar del Rio. There are people from Oriente everywhere. There are many among us from Oriente. [applause]

MICONS is doing much work in Antillana Steel with many workers from the interior, from Oriente—they are from Holguin, Las Tunas, Guantanamo. They are from Oriente region.

The party's Central Committee in Holguin Province has asked for permission to mobilize 18 minibrigades to send reinforcements to Antillana Steel—which is a very important enterprise; it is the one that has to make all the iron rods needed for our great national housing and social works plan. That enterprise must give us all the steel needed for that plan.

The Holguin Province party asked for permission to mobilize 15 or 17 minibrigades, to send them to Antillana Steel for 6 months, and to later rotate the workers.

There presently are minibrigade workers from Oriente assisting a great industrial enterprise that is very necessary for the minibrigades. There are still thousands of workers from the interior in Havana. We still have to do it that way. We go step by step. We do not want to use the minibrigades to build heavy industries. We are mobilizing them to do social works. There may be material-producing industries, and even Antillana Steel, that needs minibrigades. Minibrigades wanted to contribute, and they were sent. They will be building houses there later.

There is much work to be done in the capital and the construction enterprises had lost their labor force. It is not easy to get young people to join construction work, even if they are paid better salaries. Generally speaking, people prefer a stable job in a fixed place and not living like nomads moving from one place to another.

The labor force would not have been available if we did not bring them from the interior, but you know the consequences of bringing tens of thousands of workers from the interior: Instead of resolving the problem, they make it worse. They would make it worse. I believe you understand this perfectly. Nevertheless, there are workers from the interior here.

There are important projects for the Oriente region provinces, and thousands of construction workers will be needed. As we have said before, no special emphasis will be placed on minibrigades there, because there is a certain labor force surplus. We will mobilize minibrigades in a complementary way, bu; we are going to try to give jobs to 30,000 or 40,000 people in the Oriente region, in the construction sector. This is what we are going to do. We will also mobilize minibrigades, but in a complementary fashion, because the work project is huge. We place emphasis on the minibrigades in places where we have a labor force shortage, as is the case of the capital.

This represents a rationalization of the labor force. I believe this minibrigade movement is something very fantastic; it is worth analyzing; and it deserves being taken into account for the construction of socialism in a Third World country. We do not pretend to give recipes to anyone. We speak based on our specific experience in our capital, which has a huge labor shortage. This shortage could of course be artificial, because some payrolls are unnecessarily huge.

This partially results from the fact that construction work is hard, and it is difficult to recruit people. It is easy to do it with the minibrigade movement, because minibrigade workers maintain their ties with, and all their rights at, their original work centers. They may be 1, or 2, or 3 or more years away, if they like; and this is still true. This is a rational, political way of mobilizing this surplus force.

Rationalize your payroll and tell someone: Now you are going to be in the construction sector. This would not be a successful enterprise; it would not be good politics; it would not have good results. No other mechanism could operate this sort of miracle that this mass movement—which is both good politics and revolutionary—has produced.

We count on the workers who are combining collective interests with individual interests. In this case, we have the need for houses, a situation that affects many. But there are many minibrigade workers who have no housing needs but are still building: they are enjoying themselves while they do it because they understand the needs that others have.

The workers are taking care if not directly of themselves then of their comrades. They are helping the community, the municipality, the city. They also are working on some social projects such as Amadeo Roldan and some theaters. They are creating institutions that serve society. When they help in the construction of the new Julio Diaz Hospital, they are doing a service not only for the people of the capital but also for many citizens and fellow countrymen from other places who must be rehabilitated there.

We learned this by visiting the hospital, and we concluded that we must build a similar hospital in the country's central areas and another one in the eastern provinces. The hospitals must have all the necessary equipment because people come from the eastern provinces to that hospital, even if they have rehabilitation wards in their own hospitals. They trust the Julio Diaz Hospital so much they sometimes request transportation there directly from the airport and this...[changes thought] well, we should have more than one of these hospitals. We must have doctors available and have a rehabilitation hospital in the country's central area and another one in the eastern areas.

Additional hospitals may attract foreigners, and our medical services may become a source of foreign exchange. An increasing number of foreigners already seek medical treatment in Cuba, so medicine may become another source of revenue.

Those minibrigade workers who work 14-hour days are the same ones who proposed the minibrigade contingent. Those people work 14 hours every day; 37 women work under this system. [applause] They work Saturdays and Sundays; they are making an incredible effort. They are enthusiastically building the hospital because they see the sick people who go there. Those people visit the construction site; the doctors and nurses are always in contact with the workers. They are not working for themselves. They may never need to go to the hospital—I hope so. Perhaps their relatives will need it some day—I hope they never need it because the type of problems treated in that hospital are really serious. However, the people work gladly because they are working for the entire country.

The minibrigades involve many things. Minibrigades work for the benefit of other people, groups, factories, municipalities, cities, and the homeland as a whole. These are the feelings we must develop. We must not maintain the selfish belief that one should work for one's own convenience. You should work because it will benefit the homeland and because it directly or indirectly benefits you. [applause]

I believe the minibrigade workers in the capital will build housing worth more than 300 million pesos by 1990 even though—like I said—the houses are evaluated at ridiculous prices. Relatively speaking, housing costs here are among the lowest in the world. Certain houses bring high prices; certain houses are priced approximately 7,000 or 8,000 pesos. A two-bedroom apartment with a living room and dining room costs 25,000, 30,000 or 35,000 pesos anywhere else in the world. This is the minibrigades' main activity, and they will build between 250 and 350 million pesos worth of housing and social projects. This does not include maintenance and repairs because other minibrigades will work on this and will be given all the necessary materials. They will be paid the same salary being paid in the factories. In other words, this production increases the country's overall production and will represent an important factor for economic growth.

No one would have believed it if we said 20,000 houses, so many day-care centers, and so many schools would be built each year without paying an additional cent in salaries. We only pay salaries in special cases. For example a housewife is paid a salary when she joins a social minibrigade because she does not work somewhere else. Likewise, a retired person is paid a salary in addition to his retirement pay—when he joins a social minibrigade. Certain forces receive a salary when they are mobilized, but these are exceptional cases. The original minibrigades, the ones comprised of workers, do not represent additional expenses for the country. Their activities do not affect their work; it is simply a matter of organizing things better at their job. Better organization increases productivity, and the workers volunteer to work without pay. The original idea was based on volunteer work, but there is no such thing as volunteer work; it is simply a matter of organizing ourselves better.

Our main problem is the shortage of raw materials, but you have not had any problem due to a shortage of workers. I am fully convinced that 100,000 out of 800,000 workers in the capital could be mobilized if necessary. This is a theory that we cannot possibly prove; we will never have a project that will require all these men. Consequently, this does not clash with the factories' efficiency; on the contrary, it improves the factories' efficiency and reduces their salary expenses because the state reimburses them. It is really deplorable that this idea, which began so successfully approximately 15-17 years ago...[changes thought] Maximo began this because the factory managed was the first to begin this minibrigade movement. When was that? [person in crowd says: "In the late seventies".] In the late seventies. We sure have wasted a lot of time, gentlemen!

How many houses were not built because of the absurd theory that the minibrigade movement contradicted the system of planning and organizing the economy! It was quite the opposite. The minibrigade movement was perfectly suited to any organization and planning effort. It made the country's economy more efficient because the things that could not be done any other way could be done with this mass movement. The tasks may be completed, to meet needs the people feel so keenly; housing and other social needs. The minibrigade movement began in the capital, and it was reborn in the capital precisely 1 year ago.

I would say this was a historic date. Today, it is highly satisfactory to be able to commemorate its 1st anniversary. It was a great example of progress in terms of ideas and concepts. These are no longer the original minibrigades. As I said, everything is different. Work is done in the municipalities; it is organized differently. There are also other kinds of minibrigades; social minibrigades, minibrigades for off-duty hours, minibrigades within minibrigades, and contingent minibrigades. These have all enriched the concept or idea behind the minibrigade. We can begin work in the unsanitary neighborhoods and organize social minibrigades in [word indistinct] areas.

The same principle applies today. A worker is taken off his regular job. His factory gets paid. This will cost the factory nothing. The factory sends the bill to the state's central services or finances and is reimbursed. The worker keeps his place in his factory. He works. If retirees, as well as neighbors—that is housewives—want to join, they do. They work from morning till night. More than anyone else, the neighbors [Castro laughs] organized by the defense committees can be mobilized.

Yesterday, I read in the newspaper that a movie theater and a playhouse were built in 3 months. I imagine those who are involved in culture will be very happy that regular workers built a movie theater and a playhouse.

However, these workers had the support of the people or the community. They built it in 3 months. With the community's support we eradicate so-called unsanitary neighborhoods. I cannot tell you how many there are because there are many opinions as to what an unsanitary neighborhood is; that is, if it has 100 or 200 houses, or just 10 or 12. However, we do know there are approximately 50,000 citizens in this country living in unsanitary neighborhoods. Perhaps in 3 or 4 years they will be eliminated. Still, we must prevent these kinds of neighborhoods in the first place. We are even asking unsanitary neighborhoods for cooperation. This is what happened in La Coronilla, a new neighborhood. The residents police the area. Some of them even told their relatives: Look, you have to go back home. Before, it made no difference. They told them: take this small piece of land and four crates and build yourself a room. But now the residents of the unsanitary neighborhoods are in charge of maintaining law and order. It is not to their advantage if the neighborhoods' population grows. The problems double. But now they are committed. Moreover, we must adopt administrative measures to impose order. We cannot make great strides in a few years [words indistinct] especially because we are working with a national logic, [corrects himself] a national program. We are going to implement this development program not only in the capital but all over the country.

Therefore, we can eliminate the so-called unsanitary neighborhoods without hurting the program we are implementing for workers in the capital.

Social minibrigades are also created for maintenance work. Two experimental minibrigades of maintenance workers are already operating in Central Havana and in (Lalisa). The minibrigades that repair houses there are mobilized. Retirees, housewives, and anyone who wants to join a minibrigade are mobilized. If retirees and housewives join, however they must be paid their wages because they are not linked to any workplace. We will mobilize people because we think maintenance work is very important and decisive. It does no good if we put up new buildings while the existing ones deteriorate.

Therefore, thousands and thousands of men and women will make an effort. They will work in the municipal minibrigades in the city's renovation and maintenance projects. That is why I say this movement is now much richer and more developed. Naturally, this called for a great effort. Maximo explained here that projects had to be undertaken. This time we decided to build everywhere. There were municipalities where no new housing had been built in many years. Now we build something on every corner, even if it is just a family doctor's clinic. If there is room for a bakery, we will build one. We have to build 100 bakeries. Even bakeries are included in this strong, ambitious program. Perhaps this space is good for a day-care center, because the area is large; if not, we may have to make room. We have to build many unconventional buildings. If we have a corner measuring 15 meters wide and 20 meters long, we have to build four or five apartments there. We want to fill all empty spaces. This requires planning. Every day-care center needs its own plan. There are 17 projects for day-care centers among the 50 projects planned for the capital. We need planners for these projects. To construct all these buildings in a short period of time would truly be an achievement. We will begin 1988 in much better shape.

In the past we have been short of materials. We have announced plans for construction, but some of those involved in carrying out the plans did not believe we intended to do as much work as was planned. Some thought we were joking; in fact, there was no monitoring of the plan's fulfillment. For that reason, in the first quarter of 1987 we established a Ministry of Construction Materials Industry. We had to separate it from the MICON [Construction Ministry] because the MICON has a tremendous amount of work. We had to give priority to obtaining building materials. If we lack materials, we can do nothing. [We had to create] a program to make the cement plant operable and to create cement reserves so we will not have another cement shortage.

We are doing the same thing with sand in Havana. We are also purchasing new sandwashers, we are installing them in plants, we are getting new plants, and we are making estimates of how much sand and rock we will need. We are constructing flagstone factories very rapidly. We have asked the ministry to do it even more rapidly. We have told them to go to Artemisa to see the two plants being built there. We also want them to see our pace and see that we work day and night building these factories. We are going to construct another one in Arroyo Naranjo. [4 second break in reception] and a tile factory. We must work day and night to assemble the crushing plants, and at the brick ["rasilla" a hollow brick] factory we are building. We will be able to again use the old and noble brick in the roofs so buildings will not get wet. Of course, this is where we have more restrictions, with the so-called slabs for the roofs, which are being demanded in large quantities, and are of good quality. The process must not be accelerated, because a number of days in the oven are required; they cannot be taken out of the ovens in 12 hours if they require 14 of 15 hours, because this would affect their quality. This also requires the appropriate mix of clay; sometimes it is necessary to bring the clay from other provinces.

This is where it becomes more difficult for us to get the roof slabs required for the first stage of this program. We will have to use the famous "mortarplax" which is awful, that word mortar should come from the word death [muerte]. [applause]

That technology presents some problems in our climate. We must leave the roofs ready even if they are temporary ones. This mortarplax only lasts 1, 2, or 3 years. That's what brings problems. And then we put in the bricks. Of course, today we are giving priority to the construction of centers polyclinics, and social works, and we are now

using racilla from Pinar del Rio and from Santi Spiritu. However, we have plans to build several factories but we certainly cannot do that in 3 months, nor can we build a sand washing plant in 7 or 8 months, or set up a brick factory, or get the parts and install them. Can we get the parts and the machinery for a tile factory and start production in 8 months? That would take at least 1 and 1/2 to 2 years, no matter how fast we work.

We need to get the equipment, the material for the ovens, and we need to build the ovens to start producing the clay. We will have restrictions on the roofing materials. We will have to use a technique that is not ideal. We have been insisting that roofs should be built in such a way that they will last 20, 25, 30 years. We should not build roofs that will last 4, 5, 6, or 8 years. Otherwise, we are going to have to look back, and one of these days we will have dedicated our time to building roofs.

We should be aware that we are studying all the possibilities for creating new materials. Moreover, let me tell you that we might have a waterproof cement. This is a hope we have. Very soon, we will have about 300 tons of this waterproof cement, made with Cuban technology, and we will test this cement. Because the waterproof cement is available... [changes thought] I am not going to tell you how it is done. We will keep this a secret. The specialists have been working on that, which could mean a new hope in building roofs. We keep that as a reserve. In the meantime, we are doing a tremendous effort to increase production of regular cement.

A large effort is being made throughout the country to increase production of floor materials. There are four factories in the capital. [2 second break in reception] Comrades, we purchased the equipment for the flagstone factories more than 10 years ago, and it had been stored in its crates because there was no demand for flagstones and not much building. Some of the equipment was used elsewhere, and we had to invest in new spare parts and such things, but in the end we found the equipment. These factories are being set up in the country's interior. We are proceeding to manufacture the tile machines. What did we do? We saw that, for instance, tiles are good material, one that is traditional in Cuban houses. However, it demands many more workers, so I said let us have the tile plants mainly in the eastern provinces. Leave the flagstone factory where it is, for important projects, such as the ones in Santiago and Holguin. We are producing at full speed four lines of tiles that will give jobs to 300 Granma residents. A flagstone factory, on the other hand, only requires 24 employees, because it is highly automated. So it is better that we have the flagstone factory here where there is a shortage of workers. The flagstone factory is much more productive.

We will have to build a new type of wall for houses being built in the eastern region so we can use these tiles. A few million dollars in converted foreign currency will be invested. These types of walls are not very expensive, but producing one type of blocks, the very good cement blocks, costs around $500,000. We need several types, many types. It would cost around $1 million to produce 300,000 cubic meters of sand. It would cost around $1 million to produce 300,000 cubic meters of rock. The white cement factory that will be located in the center of the island—whose machinery is being purchased and which will be built very soon—will produce 100,000 tons of cement annually and will cost between $4 and $5 million, but it is a good investment because we now consume 200,000 tons of white cement, more or less, annually. It is going to be a high quality cement. If we use 50,000 tons, we could then export the additional 50,000 tons every year, so every year we could practically recover some of the value invested.

Tile factories are being built and bathroom accessory factories have been purchased. New wooden window frame factories have been purchased. The start-up date of the aluminum window frame factory is being moved up. This factory has a 500,000 square meter capacity as opposed to the previous one, which had a 100,000 square meters capacity. You know that right now there are projects we have not been able to complete due to a lack of aluminum window frames. We had this problem because we had only one machine. We had certain problems with spare parts, and the machine was ancient. Almost 10 years were lost while we purchased and assembled a new one. It was bought and quickly installed, and very soon it will be in production. We will have two types of frames, and we have started negotiations to buy a third type. Do you know what the approximate cost of an aluminum mold is? Around $3 million. [1-second break reception] of San Antonio de las Vegas, as you know, an explosion that unfortunately cost several workers their lives. We had one type of furnace there, now we are installing other types and we will have three types; two of them totally new, and the previous one that has been carefully maintained to produce molds. The molds are produced here and then they go to the factory where the windows are produced, the windows with clips where the pieces of glass are placed.

The high-rise buildings are behind schedule due to the lack of aluminum. It was even necessary to use raw materials [changes thought]...to do some business with the Spaniards and tell them we will give you 1,000 tons of raw aluminum for 1,000 tons of molds. This had to be done on an emergency basis. Next year we will not have to do that. What we will have to do is to make the new factory fully operational. This will be the 500,000 square meter factory, where a large number of women comrades work. These will all be new personnel, so one must really be on one's toes so this new factory will really produce as quickly as possible the amounts we need. Social projects need these products. If this factory had been in operation, if we had had the molds, we would not have had to build many of the day-care centers with wood, but with aluminum. They would be more attractive.

Moreover, we have said, be careful with the old factory! It must not be closed, it must be kept in operation. They

say it contaminates the Almendares [River]; an oxidation lagoon must be built, but we cannot afford to lose that factory's output. I am already thinking that we will have to build a new aluminum windowframe factory in the eastern provinces and that we will have to transport molds there. All these needs will continue to increase. Eventually we will want to have a capacity of 1 million [not further specified].

We were also analyzing the possibility of building a glass factory. The one in San Jose de las Lajas produces flat glass. Well, someone remembered to bring something there, and it was done [laughter]. All the way down there in San Jose de las Lajas we have the flat glass factory. It produces a few hundred thousand, I do not know what the amount is. But we are already thinking about a glass factory that produces beautiful colored glass. I was looking at some samples recently, and this [factory] would have a capacity of around 1 or 1.5 million square meters. We are thinking about doing this as soon as possible.

We are already negotiating to build a new cement factory in the eastern region, in Holguin Province. Since our total production capacity is 5.4 million tons, we are going to try to reach the capacity in all of the factories. We have estimated that with great effort we may produce 4.6 [million tons]. In Santiago de Cuba, the factory has a 600,000 capacity but this has been declining. We must repair it so it can produce 600,000. In the Karl Marx factory in Cienfuegos, efforts are being made to bring it to its designed capacity. We have been in contact with the GDR comrades to supply us the equipment. It is necessary for us to produce part of the spare parts here. This factory has a capacity of over 1.5 million and it has never produced more than 1 million. Maybe this year it will produce 1 million. But with all this effort, we do not want to be too optimistic and say that someday we will produce 5, 5.2, or 5.3 million. Some 4.6 million have been estimated. A reserve is always desired. And, of course, this would fulfill the 1990 and 1991 plans very well, but we do not want to cut it too close so we are already planning another factory with 300,000-ton production lines. Experience is worth something. The 600,000 ton factories seem to be more rational, they are larger, they take more time to assemble. So from now on we are going to order them line by line. The first line is installed and we start it at full speed, we start to produce with it.

Meanwhile, we will assemble the second and third. We will be able to produce about 300,000, I mean, 900,000 more tons of cement. At present we might think four, five, six, or seven plants will suffice, but new possibilities, programs, and plans come up and we do not want to lag behind. We will increase our steel production by 550,000 tons between now and 1990. Of these, between 200,000 and 300,000 tons will be in construction rods. We will not have a steel shortage. We will not have any shortage of cement, blocks, roofs, floors, wooden and aluminum window frames, or even electric cables.

This morning, I received a report from a comrade whom I sent to the Conrado Benitez manufacturing plant about the machines and raw materials they need to produce electric cable. To avoid shortages, we have even thought about telephones cables. Of course, this will have to wait a while. I mean, the plant to manufacture telephone cables. Even if we import all of the raw material from capitalist countries, it would cost us half the price of manufactured telephone cables bought in capitalist countries. Every 5 years, we spend between $25 and $30 million in convertible currency to buy telephone cables. A single plant at half production would suffice for this. Some of the raw materials comes from socialist states. Such raw material could be copper wire. Our costs would be cut by 20 percent if we could manufacture this cable here. We are considering both electric and telephone wire.

We will have to increase the production of local lumber. As you know, however, we have a standing agreement with the Soviets. Our forest workers will work in Eastern Siberia in subzero temperatures. Thousands of them will work there to produce lumber. This will make it possible to plan for furniture production and house construction. We will have all the lumber we need for construction. In addition, we are also considering the production of joints, and iron, copper, and plastic tubing required for social welfare projects.

One by one, we will manufacture all the materials that construction needs. We have entrusted this to the Construction Materials Industry Ministry. Its duty will be to closely follow and analyze each product and implement this speeded up raw material production program. We have also asked this ministry to control other production ministries. We know that steel rods are manufactured by the steel-mechanical industry. We are building the first laminating plant in Tuna at great speed. We have been told that the facilities will be completed by the year's end. By the end of 1988, we expect to have in Tuna a new laminating plant to produce 100,000 steel rods. In 1989, Antillana de Acero will begin its increased steel production. We do not want one of these projects to be delayed by a day, an hour, a minute, a second. This is how we are working to have all the materials available.

Maximo [Andino] spoke here and explained that the minibrigades have a new factory that manufactures concrete mixers, winches, railroad cars, and even hoists. He mentioned plans for the coming year. It is a minibrigades' manufacturing factory: 3,000, no, 30,000 railroad cars, 2,500 concrete mixers, and small portable mixers, 700 winches, 500 sand sifters, 500 lumber saws, and 50 small tower hoists for 5-story buildings. Then we have a new industry, created at the same time that the minibrigades were created, to supply the minibrigades in the capital and the rest of the country as well. There are also minibrigade members at the factory manufacturing concrete mixers. This shows what can be done. It was necessary to invest in machinery and some parts. These investments, however, have not been considerable. They

are relatively small, only having everything needed available, so as to not have a shortage of anything. This industry will supply the entire country's minibrigades as well as provide for maintenance. Winches, small concrete mixers, and everything else for the maintenance brigades will be produced. Imagine, 700 winches. Also hoists. We have also begun to manufacture hoists. This is good, efficient, high quality equipment made with good parts. An entire industry has been developed around this idea. He also said it was necessary to look for equipment. He mentioned the equipment earmarked for the reserves, a large amount. The capital's minibrigades have received 298—nearly 300—trucks. They have also received 36 rakes, 38 hoists, and 10 dump trucks. He also mentioned 13 backhoes, 7 front loaders, 31 compressors, 16 bulldozers, 55 tractors, and 15 powered dumpers. He could have also mentioned dozens of those little Montuno cars with the Volkswagen engines. These cars, which are mostly made of plastic, may not be good for much, but they are useful for the minibrigades. This is very important. These cars will perhaps not be good for the mountains or rural areas, but officials would be able to drive around in one of them and travel in Havana more safely than aboard a motorcycle, which could stall or bog down. We even have some of these little cars in reserve, to move around. There are dozens of these Montunos. We also have dozens of power dumpers for social projects or whatever. We also have been manufacturing concrete mixers and installing them on dump trucks. Also, we have begun to manufacture 50 small excavators with a capacity of 0.25 cubic meters. We are also manufacturing 50 small loaders. We will distribute them in the capital.

We are building trailers for transporting material. We are building several dozen. Our machine building industry is already contributing a lot to this. We are also building compressors and clamps. We are having the machine building industry go along with the construction program being implemented throughout the country.

The machine building industry has already built a cylinder-vibrator [cilindro con vibrador]. We are testing it at a work site. The machine building industry is also producing some front loaders that are very important. This equipment is very important. For example, if a truck stops running... [changes thought] but if a front loader stops working, this would keep seven or eight trucks from working. A dead loader will stop cylinders and motors. It does not allow the full use of bulldozers. A loader costs $50,000. Unfortunately, we still have to buy loaders in capitalist countries. We plan to build them in the future. We have begun by buying parts and trying to manufacture as many parts as possible.

It costs $50,000, but it can stop equipment worth $1 million. There is some equipment that is very strategic and one has to be aware of all this when one establishes a brigade. We are already building dump trucks. We take a chassis, we spend $2,000 on certain parts, and we have a truck that is worth 40 or 50 thousand pesos. We make the dump trucks out of Soviet trucks. Before coming here I had a meeting with the CEATM [State Committee for Material and Technical Supply] comrades, with the [Central Planning] Board comrades, and other comrades, and we analyzed all the equipment coming next year from socialist countries and how we are going to distribute it.

And do not feel that we are busy with transportation only. We are also busy with the water system. And we hope that by 1988 the water system in the entire country is fully recovered. It is almost totally recovered in some provinces. That means much equipment. And we are combining a certain amount of socialist equipment with equipment that we are building or adapting ourselves, such as the trucks, or with a small amount of equipment that we unfortunately have to buy from the capitalists. Analyzing, having very centralized control, I said I wanted to have list of all the equipment arriving and establish priorities. And this is a great effort that we are doing in another aspect of the water system. In a certain way we have also recovered the capability of building roads and highways, but by 1988 the water system will have recovered with projects for building irrigation ditches, drainages, everything. It has been a great effort.

I was also analyzing what equipment our minibrigades are going to need in the capital and what the minibrigades in the rest of the country are going to need. A single year, 1988, can give the answer to two great efforts: the minibrigades movement, the grandiose, ambitious program of social plans and housing that we are going to carry out throughout the country, which will enter its 2d year in the capital, which means a lot more projects considering the water system; and also the recovery of maximum efficiency in construction. This year can provide the answer for the entire construction program. This is a large program. Minibrigades do not mean only minibrigades for water works—it also means important projects such as the CEN [electronuclear plant], the enormous Moa project, the eastern thermoelectric plant, the port for supertankers, the Cienfuegos oil refinery, and many other industrial projects to which others, bigger or smaller, will be added regarding the construction material industry.

There are also other very ambitious programs in the agricultural area, such as the Camaguey plan, which in 5 years is going to build 300 large cattle farms, all of them in the Camaguey triangle. We are going to build 60 every year, as well as 500 houses per year and many kilometers of roads. We already have minidam brigades at work there with excellent construction speed. This is one of the largest plans in the country; we can say that the agricultural development capability is also being recovered. This was also one of the things that had been lost among so many silly things, foolish things, and erroneous theories. An allocation of equipment was recently made for that plan in Camaguey.

We will also start in Tuna, in Ciego de Avila, less ambitious but also important cattle farm construction projects. Then in 1989, we will extend to Granma and to Sancti Spiritus. We want to have Camaguey produce the milk for the capital—actually for Havana Province; in the past, the province was also part of the capital. This means we need almost 1 million liters per day. We will therefore not need to fear anything regarding child-care centers, special schools, or new hospitals, because we are going to be producing much more milk and agricultural products than we are going to need to fill those needs.

It would be erroneous to build more child-care centers, more special schools, or more hospitals with more beds if we do not make a similar great effort to produce food. We are going to produce much more than the country needs in these programs. The country can do more. But really, the path had to be cleaned from erroneous theories, of technocraticism and bureaucratism to be able to do the things that we, with our force... [changes thought] We were tied up by a number of mechanisms and now we are loose. We will see what happens, whether or not we can do these things. Also, in the capital, we are not only speaking here about houses and child-care centers and schools. In 1988, the child-care program will be practically complete. It may be that a few more would have to be built in new areas, or more needs would come up, but there will no longer be the shortage of 19,500 spaces, which forced us to implement the 100 child-care plan.

In 1988 [year as heard], all our needs for polyclinics in good installations already had been resolved. There could be a new neighborhood and a new polyclinic there. However, next year all our needs for special schools will be satisfied. Then, in 1989, we will begin new programs. We will begin programs for primary and secondary schools.

We already have the bakery program for next year. We will build 29 next year. However, it seems to me that you either completed or eliminated 1, because there were supposed to be 30. [laughter] But Maximo mentioned 29 here. I do not know what happened with that bakery. I know that we will build 100 in 3 years. We will have completed the bakery program. We will also have good quality bakeries. We will produce several varieties of bread and pastries. This bakery project is secondary work. This is an auxiliary project among the big plans to resolve the bakery problem without a lot of effort. The people's government and the workers of the capital will do this job without a great deal of effort.

We have almost resolved the problems of the child-care centers and the schools, with a minimum of resources. We will later have to give full attention to that, because there are still projects to complete. We still have schools, stores, supermarkets, sports installations, swimming pools, and social and cultural projects to build. Wherever we need a movie theater, we will build it; and whenever we need a playhouse, we will build it. In other words, no sector will be forgotten here.

Regarding the playhouses, work is being done at the Campoamor, the Garcia Lorca, and the Amador Roldan. These are projects connected to the cultural sector. Education, culture, and sports will not be forgotten.

We still do not know the complete plan for swimming pools. However, we will build all the necessary ones. I was telling Lezcano and Chavez that when we build the first swimming pool in downtown Havana we are going to have to call the police, or perhaps we will have to establish a certain number of blocks to a pool; if the Lenin pool usually has 4,000 or 5,000 people, when we build one or two, the first ones in downtown Havana, which is a densely populated area, we will have to establish rules to prevent public order disturbances.

However, we thought that, logically, we have to begin with 2 or 3, and some day we will have 20 or 30.

We will build those we really need. We know how to build; we can build. We are already capable of manufacturing materials and equipment. We are already capable of carrying out projects and doing things.

One would think that swimming pools only need water. However, swimming pools need water filters and circulation systems [words indistinct] 6 months and the right quantity of chlorine, and no one thinks that swimming pools waste water. It is ridiculous. We have estimated how much water 40 swimming pools would use. It is almost less than what would come out of any big city drain. It is not a matter of changing the water every day or week. In 6 months we are going to have the special equipment.

In addition, we are winning the battle against diseases. Sometimes meningococci made people afraid of swimming in pools, but we have high hopes for the success of the vaccine that we have developed and are testing in large quantities; therefore, we will be able to practice this sport and other sports. I am speaking about that one, but we are creating a pilot plan in El Cerro for the development of sports installations. Perhaps at the party's assembly to be held in the capital in late November they can tell us about how it went in El Cerro with the pilot plan for the construction of sports installations.

As you have seen, (?613 sports installations) have been built. [Words indistinct] who could do that if not the minibrigades. How could it be accomplished if not with the movement of the masses—but, of course, with good direction and organization of this mass movement by the party and the people's government. The secret of the 600 was that each center was told: You do this, you do that, you do the other. Imagine a company building in 613 different places. When does it start, and when does it complete them? Never.

I think that the big enterprises were not created to build doctor's offices. It is a job for the minibrigades. There were 613. However, next year the house will be bigger

than the doctor's office and it will also include the nurse's home. Things get a bit harder for 1988. However, the minibrigades already started them.

We have two new projects. We are not talking about 12 or 39 projects that were the fruits in the architects' contest. There were 12 winners. In 1989, we will build 12 different projects. We began with two for 1988 and, of course, these two projects are bigger. It will be better in 1989 because there will be a greater diversity that will be more in line with the terrain and the architecture of the area, and so forth. We have not wasted any time. We held a contest, and we have 12 projects. It was something that began not long ago with a small area. That's the first step. It began in a garage. That is how some family doctors began to work; some began in a garage. Then they acquired a larger room and then a much larger room. Then they acquired this house. But now there are two projects. However, in 1989 I think that we will reach the limit where we should go in this. These are very beautiful projects that can be expanded.

We want to guarantee the stability of the family doctor for 10, 15, or 20 years, whatever it takes. We want them to have a good house that he can expand. A house for him to live in—not only the doctor but the nurses as well. This is a great step forward in so-called primary medicine. This is the initial stage in health care.

Next year we will continue. There will be 600. Next year—do not forget that our 140 young doctors from the capital whom we sent to Guantanamo will return to the capital. What a bunch of young men they are. They did not hesitate to go to the most remote places in the mountains. We also sent doctors to the Santiago mountains this year. They will also go there next year.

However, we have already begun to receive the fruit of that cooperation with Oriente Province. There are 140 doctors whom we can say are almost veteran doctors after spending 2 years in the Guantanamo mountains. These are great steps forward.

Our social projects include houses for family doctors.

However, in 1992 we will complete these houses. The fact is that we still have construction capability and we have to see what we apply it to.

We are also thinking about gyms, so the young population, the adult population, and even the old people exercise. We are going to study what type of gymnasium, what size, what characteristics it should have. We are going to use the experience gained from the few gymnasiums we already have in the capital. We have projected for the year 1989 several gyms, several high schools, several grammar schools, several olympic-size pools, swimming pool complexes—olympic pools are something else; they have to do with the Pan-American Games. I said that these olympic pools are going to be built whether we have the Pan-American Games here or not, because these are sports installations for the capital. The velodrome also will be built; the multipurpose halls will be built. They are already being built. We can build them, so why not build them.

Social projects are already built, but as we finish a project we start a new one. The hospitals are being built by MICONS [Ministry of Construction] enterprises. At the end of 1988—it is really the beginning of 1989, but we like to be somewhat ahead—at the end of 1988, we are going to start the excavation for the Eastern Clinical-Surgical Hospital, the Western Clinical-Surgical Hospital, and the Eastern Pediatric Hospital. By then we will have finished the hospital we are building here in Marianao and we will be building the others, Brothers Almejeira, east and west. There will be a surplus of hospitals. But there is an increasing demand, even internationally. In these eastern and western hospitals we can have two floors or one, 100 beds or 200 beds for international medical services.

Nobody knows what needs [1 second break in reception] customers that may prefer to come here instead of the United States because it is very, very expensive there, and we can give better service more economically. With our health service's increasing prestige, we can turn these hospitals into a source of income. We already have hospitals where we have seen diplomats, tourists, and foreigners come, and they are already contributing to the country's economy with their convertible foreign currency. They are coming to the Almejeira; some of them come for kidney transplants and they bring their own donor. We are not sacrificing any of our own patients. [Words indistinct] that we may use that kidney for another patient. We have done that for internationalist reasons in some very exceptional cases, with some patient from some friendly country. But we are not exporting kidneys. There are patients who come to us with their kidney donors and everything; in (?lithotripsy), there is the corporeal [as heard], and there are those who have come here to get treatment.

This is a great chance for medicine. This is in line with the country's development and can become an important source of income for the country. This is what is now being called medical tourism or health tourism. There are hundreds of people who come every year to have their vitiligo cured because we have the medicine and treatment for it, developed in Cuba by our scientists. And this has become a source of income for the country because there are millions of people... [changes thought] sometimes some of these new vaccines we develop result in a source of income. There is a very important new vaccine factory being built in Havana Province that should be finished by 1989, and so on. And I say that we are doing very well not just in the capital. MICONS is working on this, and we have to thank the people from the eastern provinces in this case because they are helping us with some health projects.

[Words indistinct] Miguel Henriquez, you cannot imagine the type of conflict going on there, and with all the estimates and people we want this to be finished by that date with the adequate quantity and quality. One cannot miss a deadline when one is building a hospital. We have said this schedule has to be complied with. This is the strictest of all schedules. If, for the minibrigades, the most important project is [to finish] the 50 day-care centers before the end of December, for MICONS enterprises the most important thing is [to finish] the Miguel Henriquez [Hospital]. Of course, we want this to be done with the support... [changes thought] the minibrigades will have to offer their support for this project, no doubt, because there will come a time when we will need many bricklayers, but we will supply them; this [project] is not going to get ruined, and with all of our 30,000 minibrigade workers we can give some support to MICONS so the building can be finished by 31 December. There will be several derricks, and they will have to be directed by radio so they will not crash into each other. All adequate measures are being taken, and we are going to show that it can be done, that to fulfill commitments is a principle, and that it can be done.

After that hospital is finished we will start the others, and they will be built in 3 years. We have set comfortable terms: 3 years is ample time. In the old days construction was started and it would last 12, 14, or 15 [years]. Let us say that all of a sudden the Ancon Hotel was opened. I remember when it started, 14 years! [laughter] Fourteen years burying cement, steel bars, labor, resources, fuel, and materials; 14 years, so that in the end, by the 15th year, we could start earning some foreign currency. Can a country be developed like this? Can there be any progress that way? Did we have to do away with all that foolishness or not, comrades?

Was this process of rectification necessary, or was it not? Fourteen years burying... [changes thought] Now I ask the minibrigadists in the capital, how many years have you been burying materials and resources and fuel in the day- care centers that we are building? The answer is 6 months, 7 months, 5 months in the one we opened recently. In a few months, and we already have the center full of children. And I feel this is the only way to work. This is not crazy, to do everything in a hurry. The fact is that by principle one cannot spend 5 years [working]. They used to schedule the projects for 5 years and they were never built. [laughter] But suppose we kept on building one per year as had been planned; it would have taken us 100 years. You can easily see that those ideas were wrong. It was as if it was not possible. How then is it that it has been shown that it is, in fact, possible? It was said that there was not enough labor, but how is it that it has been shown that there is, in fact, labor? That we did not have enough materials, but how has it been shown that the materials can be produced? By using a little more fuel, but not so much that the country is ruined, with a relatively small amount, since the country's fuel production is going to be augmented. With a relatively small amount.

What if the women do not want to send their children? What will 10,000 openings in day-care centers mean? What will the creation of 21,000 places in these 2 years mean? It will mean 21,000 women who can work in producing material goods. They may also work as planners, engineers, or doctors. Eighty percent of these workers are women, which means 21,000 and 100,000 in the entire country: 100,000 women. But it also means approximately 17,000 jobs, more or less, in the day-care centers. Four hundred day-care centers accommodate 100,000 children. This creates between 20,000 and 25,000 jobs for women. And there are places, especially in the eastern provinces. Are we wasting money, or are we supplying factories with female workers? We are giving the factories the services and talent of women in a country where over 50 percent of technicians are female. Is creating day-care centers throwing away money? Is it wasting money? Why do we present the day-care center as a simple social expense? Houses are also social expenses, and if we do not build them how does this reflect on our socialist system? We may say that we... [interrupted by applause] Here we want socialism. A house does not produce material goods, it requires electricity, water, and materials, and it produces nothing. It does produce well-being and represents a standard of living. What do we want with steel bars, flagstone, cement, glass, cable factories, sand, and rock if we are not going to build houses with them? But we do not want all those materials only for housing, and we are far from devoting all of them to housing. We are not building more factories because we do not have equipment. If we had more equipment, I would probably tell the minibrigade members that I think it would be better to build 18,000 houses in 1990, instead of building 20,000. We could use the material from the other 2,000 for factories. But there is a better formula, comrade minibrigade members: Let us build the 20,000 houses and also build the factories, by seeking more workers, more materials, and more resources and by working harder. Why must we be obligated to take from one priority to use resources for another priority. If I have 10 items, 5 here and 5 there, why must I take 3 from there to have 8 here? What I must do is add three more here. I do not have to take away from one area here to give to another, but simply exert more effort. But there is always the tragic alternative—that to have more in one area I must take it from another area. There is a formula: create new resources, use intelligence, and use imagination. The fundamental source of riches is work. We may use fuel, but by working better, our explorers, geologists, and drillers may find more fuel. Yes, we can have more: more cement, more fuel, and more dam-building brigades. But we can tell the workers who are building the power plants, hurry up, finish the Matanzas power plant quickly because it produces 300,000 [measurement not specified] and uses less fuel to do it. We can tell those who are building the eastern power plants to hurry up, get those units going so we can close the plants in Tallapiedra and Regla and so we can have more fuel and more electricity. Why not? That is the formula: either seek more resources, or tell the workers who are working at the shrimp farms to

speed up that program, tell the construction workers to build more ponds, and tell the scientists to speed up their work. This formula would solve the problems so we can export more shrimp and earn more foreign currency. We can tell the same thing to the miners, and to everybody, to encourage them to make better quality products. We will also tell hotel workers to give better service so the tourists will come, instead of scaring them away. This way we can earn tens and even hundreds of thousands or million of dollars. [applause]

We might perhaps be able to earn hundreds, thousands, or even millions of dollars from tourism. We can attract tourists to our keys with their magnificent beaches, far from our coasts, if we develop them. We have the sun, the unpolluted ocean; we could develop the keys and use them as a resource, without letting the tourists contaminate us. We do not have to have any contact, but we do not have to be afraid of making contact. We will tell them to come and see our capital, see where the workers live, see how we are buildings tens of thousands of houses, see the city plan, see how socialism solves problems, and see how socialism can build these 50,000 houses in the capital and add 100,000 or 200,000 more in a few years. [applause]

We can also tell them to look at how we build aesthetic high-rise and low-rise buildings. We build ordinary and extraordinary buildings. See how we care about the city's looks. See all our children, our day-care centers, our schools, and our education. See how all of our children go to school in the morning and afternoon. Come and see an office complex, come and see how the people live, and come and tell us whether any other city—New York, Washington, Paris, or London—has what we plan to have. [applause]

I think this is all possible. This is not only a dream; these are realities. They are perfectly possible if we work well, if we are wise enough and sane enough, if we manage our resources well, if we are able to use our forces, and if we know how to use the talent the revolution has created. You know very well that in the first few years we could not talk this way. To talk like this would have been foolish when we could produce only 700,000 tons of cement. Now we can produce over 5 million tons of cement. We can use steel and electricity as resources. We have experience.

I say we can build the model city and make all the country's cities models. This can be done in a few years—12 or 14 years. By 1992, we will have built 20,000 houses. We will see if we can or cannot accomplish this. We will see. If we proceed at this pace, we will reach 220,000 [figures as heard] houses, not counting the family doctor houses. Next year, we will complete 1,200 houses exclusively for doctors and nurses. We are not including them in the count, even though they are houses.

We tell the tourists: Come here, because we have here a strong and educated country. This is a country with a high level of education. We have a good general culture; we have a good political culture.

In addition, we have a healthy country. Come here, because you will not catch AIDS or anything like that. [laughter] Come here; there will be no AIDS, yellow fever, or meningitis problems. In addition, we have excellent hospitals. If we develop any of those places, we can develop them with hospitals included. These hospitals will treat tourists. Medical treatment is one of the most expensive services in the capitalist world. We can work fine and create convertible foreign exchange: resources and everything we need. If we want more cement blocks, we can pay for them. If we want a crystal factory, we can pay for it. We can pay for the materials involved. If we want a factory of electronic boards, we can buy the components for that factory. Our country is gathering the people who are trained in electronics. We make excellent equipment, such as the immunoassay equipment. We design programs, which is one of the most difficult aspects of computer science. We have many people doing that.

So, resources have been found; let's use them. This is what I say. If there are no resources, we must create them. If there are no resources, we must create them with our work and our intelligence. I cited a few examples, and this is what we are doing: We are creating resources. You should see the factory of electronic components that I saw in Pinar del Rio; it is a marvel. There, the Cinderella, the so-called Cinderella, where there were so many large landowners and so many illiterates, is now a place where young people handle complicated technologies to produce. This is a marvel. We can improve this technology. They have more equipment. We must be up to date in the most modern techniques. We must use automation even in production.

Therefore, I see that we have opportunities if we know how to use them. This is the meaning of what you have done this year. You are showing the miracles that can be done by the people, the revolution, and socialism.

I wonder if in the capitalist system we would have been able to create these minibrigade groups. I wonder if in such a system we would have been able to have men work 10 hours, 60 hours, 60 hours per week, Saturdays, and [words indistinct]. I wonder if under any other conditions there could have been this spirit of work among our people today. We have it in many places. I know many groups that are accomplishing great labor feats. Some may ask why do that, why kill ourselves? We do not want to kill ourselves. It is just that we want to progress fast. It is not a whim. To work hard is a need of our country and our development.

We must recover the time lost. I am not talking about the time lost in the revolution. I am referring to the dozens of years lost before the revolution. The centuries lost by

our people must be regained. It is not a whim to work just for the sake of working. No one would be doing anything with pleasure if it was done just out of a whim. It is a need. I believe that the project justifies this behavior. There is no greater satisfaction to you and our people than to see this progress.

If there are children who need double-session schools, then we must build these schools, quickly. If there are hundreds of families that live under very bad conditions, then we must build schools, quickly. This must be done between 1987 and 2000, and not between 2000 and 2020. A technocrat or a bureaucrat may sit and come up with figures, stories, and nonsense. Perhaps he is living very well and thinks that others are too. So, he says, let us build the houses between 2000 and 2020. We say there is a need for thousands of houses, and these houses must be built between 1987 and 2000. [applause]

If we need to build 100 child-care centers, we must build them within 2 years. We have to build what we need so this generation can see these projects and enjoy them.

We must make a just and equitable balance of economic and social development. If there are no resources, I repeat, we must create them, so we will not make one thing at the expense of the other. We must create resources to give each development directorate what each directorate needs. [applause] In the capital, we will not only build houses and hospitals; we will also reconstruct the city's water and sewage system. It will take time. It is a great effort. We are seeking the technology and machinery. Some of these machines refill with cement inside without having to pull the complete pipeline out. We are thinking of new factories to make new steel pipes, so we will have all the pipes we need.

We must save water. We estimated that the city needs 500 million cubic meters of water by the year 2000. We must see that the water will not be wasted. Each house should be metered. Each tank must receive the water it needs, and those who waste must pay for the excess water, that is more than 90-100 liters.

Society can live perfectly well like that, provided they consume only those amounts. We have seen that those who have water meters use one-third of what is used by those who have no meters. In other words, we do not meter water with the intention of collecting money; we do it because we want to educate or teach the people. If everyone limits consumption to 90-100 liters, then no money will be charged—we are not interested in charging money. The main thing is not to squander the water. We need water in the western region, which is barely 40-km wide and does not have big rivers, only subterranean water deposits. We need water for the agriculture, industrial, and social sectors—all the schools, child-care centers, and families—so we must save the water.

We are also creating new water sources. We recently held a meeting to discuss the capital's water supply, and it was decided to immediately begin the construction of a system to transfer water from the river in Matanzas Province to Havana Province—for agricultural purposes—because the basin...[corrects himself] El Gato Aqueduct drains 100 million cubic meters. We need the water for the Pedro Somas Poston Canal that we built for Guaira, because this reduces our agricultural capabilities, so we will transfer 100 million cubic meters. However, that is not all; we also have plans to build a dike in the south, to prevent water leaks from the ground water deposits, and should produce 300 million cubic meters in its first phase. It is likely that a group of trucks will be seen working in the south this year, because the dike is being built with loaned trucks. The hydraulic projects include a dike in the southern area of the province, to prevent water leaks from the ground water deposits.

We also have plans to carry out experiments in a water treatment plant so the water that drains to the sea south of El Morro is treated and then used to grow sugarcane and other things. We will treat used water that drains to the sea. We are not in Pinar del Rio's privileged situation, because it is in the central region; we will build a secondary dam with a water treatment plant there, and the excess water in Pinar del Rio will be stored at El Punto Dam. Thirty percent of every 100 liters either evaporates or is squandered by not paying attention, etc.; and 70 percent drains out to the sea. It is high time that we begin thinking about recovering the water that drains out to the sea. We can either treat the water or pump it back; we will have electricity for this. We will have the Cienfuegos electronuclear plant for this; and we will have electricity to pump back the water and use it in the agricultural sector. We must seek ways to recover as many resources as possible, to ensure that the western region has enough water to cover the capital's needs—water for the industrial sector, water to cover our social needs, water for the agricultural sector—and that we fulfill all our needs, including our nutrition needs. We cannot forget that Havana Province, which exports hundreds of thousands of tons, must also supply our edible roots, vegetables, milk, and many other products. We have been thinking about that topic.

I was also thinking about Havana's streets and about the subway. We are seriously studying the possibilities of constructing a subway, which we will start in the coming years. Meanwhile, we have to enlarge a few avenues, such as Boyeros and (Vento) Avenues; and we have to build a few more. I recently asked for the road construction plans leading up to the year 2000. One of those plants calls for the enlargement of 100th Street, turning it into a 6-lane street west of Pinar del Rio. The contingent I spoke about at the beginning began doing this. The work was scheduled to be completed by 1990. We decided to use the contingent's experience, mobilize a party contingent, assign them the appropriate equipment, and then let them go to it. We planned to begin in December, but with such good luck that...[changes

tought] since that was an old idea, there were 6 km to be completed. We picked December because some projects still had to be completed. We found 6 km. Then we talked with Lezcano and Chavez. And I told them: We must continue with this work, because we have the equipment; the only thing remaining to be done is to recruit all the men.

We decided to accelerate the job. One day, (Chavo) told me at a meeting with the artists: We will begin on 10 October. I said why begin on 10 October, why not begin on 1 October? It seems Chavo was thinking about the great day of the fatherland, but it is more patriotic to begin work 10 days ahead of time. [laughter and applause].

They got even. I had assigned the equipment for this job on 9 September, and from the time the equipment was assigned to the time they started work, 12 days had passed. One day, Lezcano came to me and told me: You can stop worrying. I said: What? He said: They have already started working. So, as when one warms up the muscles and does maintenance work on the equipment, they have yet to build a shelter.[sentence as heard] They have already started working there. Tomorrow we will officially begin the job, but they started on 21 September. These are excellent and impressive workers. I saw them yesterday. After the National Assembly sessions ended, I talked to them for over 30 minutes. I am pleased with their attitude. They said we do not want anything for this. They said: We are communists. They said it with those words. In my opinion, those workers should earn the appropriate salary. I asked them: How many hours will you work? They said: 10 or 12 hours. They are communist workers, but they should be paid for their work. We know they are not exerting themselves for money, because no one works 14 hours for money. Anyone who works 14, 13, and 12 hours is doing it because of his conscience. When a worker works more than 8 hours, he is doing it because of his conscience. I also spoke to Comrade Lezcano about this issue.

I was impressed with what those workers said. We have trust in them. They are working hard, are well-organized, and their productivity, I believe, will be quite impressive. They cannot be compared to other workers, because one cannot find a group of workers such as these anywhere. They do an excellent job building roads. In Pinar del Rio, there are excellent workers, but not all are communists. This group of workers are party members and belong to youth organizations.

We are heavyweights. We cannot have a heavyweight boxer fight a lightweight one, no matter how good the lightweight boxer is. They have all the new equipment and they are very excited about the work they are starting. Those who planned these works said they would be ready by 1990. Of course, they did not know who would do it or when the job would be done. Anyway, the project will definitely be finished by December 1988. [applause] We will even have time to spare.

We do not want to pave the roads right away. The roads should be used first. No overpasses will be built yet. An overpass has to be built over 100th Street and another one over Boyeros Street. That job will take a little longer. However, the entire road will be ready by December 1988. Drivers will no longer have to merge onto the traffic jam on 51st Avenue. Those who want to go from La Plaza, for example, to Pinar del Rio will be able to take 100th street and drive 8 km down a six-lane road.

We are planning to use concrete. We will have to get a concrete (?mixer). One does not really cost that much. We will need approximately 50,000 cubic meters of concrete, which is equivalent to 13,000 tons of cement. Each cubic meter of concrete is 26 percent cement. Thus, there are 26...[interrupted by applause] No one should believe that people here have gone crazy because they want to use concrete. No. Concrete is more economical and it lasts forever. Asphalt is not suitable for this climate. We plan to use concrete as much as possible in the construction of all new roads.

By 1989, road work will be heading east, from the 100th Street toward the National Freeways. Projects there are still under way at full speed, but, above all, we want to know as soon as possible when obstacles get in the way, so that problems can be resolved in a timely manner.

When was this part of the famous road project in the capital scheduled to be completed? It was supposed to be ready by the year 2000. Do you know when it will be ready with this contingent of communists? In 1990. The six lane highway will be ready in 1990. [applause] Are we going to be waiting or working for years? Those people really work at full speed. They work as fast as the project requires.

What is my primary concern? I am concerned about the workers' health. You must have a standard for maintaining good health. By tomorrow, this contingent will have a doctor and a nurse, which have been assigned today. In addition, they will get a special checkup. They will be among the best fed in the country—they and a few others, too; not they alone. Don't you worry. We must get the necessary cooks, because you will be the best-fed people in the country. That's for sure. However, we are doing the same with the brigadists. We are in the process of doing the same thing with the brigadists. Of course, those who are in social work are given priority. Sometimes we do not have enough of something for 20,000 to 30,000 people, but we still send what we have. We must get things here and there.

There are some products...[changes thought] For example, we have increased the rice quota for construction workers in the capital. How did we manage to do that? It almost came out of the blue. You may ask: How can rice come out of the blue? I will show you that it is possible. [laughter] Do you want me to show you how? There is a kind of rice which is called precooked rice. [laughter] It has more vitamins, minerals, fiber, and protein.

Unhulled rice is precooked. Then it goes through a plant that does not need fuel because it uses rice leftovers the mill accumulated during processing. You cook it, grind it, give it careful and minimal polish, and you have precooked rice, which is much better and healthier. We have not acquired the precooked rice habit. We are acquiring it. The members of the minibrigades are consuming it. However, we told them that since we had estimated that 80 grams of rice per day could be a problem for the construction workers, we told our comrades working on construction projects in the capital that we would send them precooked rice in sufficient quantities so they could increase their quotas to 120 grams. The people's government tried to get the factories to send it, since they did have the quota of 120, but the people in the minibrigades wanted their quotas sent to them which is troublesome. Some social microbrigades did not have a quota, so we assigned them a quantity of precooked rice. That was not according to the plans. There was no quota, so we had to invent something. What did we invent? That is simple; and you will see why. The little plant we bought—we have three of them now—can produce 7,000 tons of precooked rice. When 10,000 tons of unshelled rice are ground, they yield 6,000 tons of rice—the traditional rice we are used to. However, when the rice goes through the process to manufacture precooked rice, the whole grain is saved and there is less waste. So, out of every 10,000 tons [of unshelled rice, we obtain 7,000 tons of precooked rice. It is a better-quality rice, more nutritious, and yields more. With the other kind of rice, something is lost during processing.

I will tell you a secret. So I thought: This will not be accounted for, since no one expected this additional rice anyway. I told the comrades: Take note of this; this is additional production, which has not been assigned. So we ended up with 3,000 additional tons of rice from the same amount of unshelled rice. Do you understand? [laughter] Instead of obtaining 18,000 tons from 30,000 tons of unshelled rice, we obtained 21,000 tons. So, by separating the additional tons, we had a rice reserve. And with that, we got the quota of the minibrigade members, who are consuming rice now, and those of construction...[interrupted by applause] So you can see the plans we have for rice consumption. In some municipalities, we are already selling this rice for 40 and the other kind for 25 [not further specified]. Fifteen percent of the rice buyers are buying this type of rice. So we may have a few factories in the long run.

From my estimates, if about 150,000 or 160,000 tons of precooked rice are consumed in the country, we will have 22,000 more tons of rice without using one drop of water, one tractor, or one dam. This will happen by simply using a technology that makes better use of the product. As a result, greater quantities of the enriched product are produced. We already have all the rice needed by the country's minibrigades, the new construction force, day-care centers, the special schools, and the new factories. In other words, we definitely have a reserve.

We have created a new supply—without taking anything from anyone—of a better product. I recently explained to the National Assembly that a single enterprise, the Los Naranjos genetics enterprises...[changes thought] I asked them how the plan was progressing and they said: We have surpassed the plan by 6 million liters [of milk]. I calculated that 6 million liters is what 40,000 children consumed in 1 year in the day-care centers. We could start to move on by producing food, producing more milk, vegetables, fish, and meat. In other words, we must not think that because we create these new institutions, we are going to have the same problem. We are going to have more milk, rice, vegetables, and other types of food for day-care centers, hospitals, or whatever.

I was saying [5-second break in reception] in social works want more because some of this merchandise arrives in small quantities. Sometimes we have to buy...[changes thought] because of commitments, we fish in Canadian waters, but we are obligated to buy a certain amount of some products there. Small quantities of these products arrive here. For example, the fish sticks you in the minibrigades have seen and eaten. Have the rest of you seen them? [3-second break in reception] It is a fish patty that tastes very good. Not much arrived, and I said, better not distribute it all but instead save it for the minibrigades. Our fishing boats caught about 6,000 tons of squid in the Antarctic. We spoke about this with the fishing sector. They caught 6,000 tons. Of that amount, 4,000 tons were placed on the market and 2,000 were saved for factories and minibrigades. We have a reserve of squid. They caught very good hake; you have eaten nearly all of it. A little bit is left. You have eaten nearly all of it. The minibrigades still have some left. [applause] In this way we have been looking for resources and establishing some food reserves for this program, which did not have a quota.

Well, I was saying the entire group should be calm. You should be calm, look for good cooks. Look for good cooks. Lezcano was going to look for an experienced hotel cook. You are going to have everything. You are also going to receive products from the vegetable garden. I will talk later about the vegetable garden. The only limit we will place on your work is your health. You need nutritious and excellent food and good housing conditions because many of you will stay there even if they are inside the city. There will be doctors and nurses for medical checkups. In other words, we will be concerned about your health, especially of those comrades whose overtime we limit. We expressed this to those working in Julio Diaz. The chief of the group is the comrade who came here to pick up the flag. He told me: I will rotate the workers. There were many volunteers there who wanted to work more than 14 hours. And he said: I will rotate them so no one will work for 18 hours. I will rotate the workers. There were many volunteers there who wanted to work more than 14 hours. I will rotate them so no one will work 18 hours. It will go more smoothly if we rotate shifts every 15 days or every month.

We must be concerned about setting limits on the people's work spirit because their health might [3-second break in reception]. It is truly encouraging to see the workers' spirit. I think their enthusiasm will reach the road-building enterprises. We will now know exactly how much 1 km costs in fuel, materials, other resources, and everything else. We will know the real cost, especially in many of these projects in which the cost is half the value of the finished product. We will be able to determine whether or not it is profitable. Some projects are being built at half the cost. We have some very interesting projects. We are accounting for all expenses. We will know each vehicle's exact worth. Enthusiasm can really accomplish things. In other words, the equipment will be used 100 percent. It will not be used for only 5 hours. Some claim the vehicles are used for 8 hours, but they are actually used 5 or 6 hours. The equipment will be used for 10 or 12 hours at a time. It will receive necessary maintenance.

In this way, we will also develop the capital's road plan to overcome traffic congestion. This will save hundreds—no, tens of millions—of pesos and resources every year because the capital's traffic jams take a tremendous toll on our resources and fuel. An ambitious program will be carried out in all aspects.

The Gato basin I mentioned will help us in the critical drought situation. We will not have all the water we need, but what would happen if we did not have this Gato basin at the end of this year? How would we endure the next drought? We will have some restrictions, but we will have 80 additional cubic meters of water. When we learn to stop wasting water and other resources in our homes and in the streets, and when we start building the system, which has thousands of cubic km of water, then Havana will also have all the water it needs. The homes we built, the homes we repair, the schools, and all the social installations will have enough water. It can be clearly seen that with the general and encompassing measures we are adopting we will have considerable development. There will be no more ghost towns like in (Balance), where there was a textile factory, and in Wajay, where we had houses, but no streets, stores, or anything else. That will not happen again, because we will not permit such idiocies and foolishness. Previous idiocies were definitely the fruit of technocracy, of theorization, and of bureaucratization. I hope that our party will learn from this experience and that kind of thing will not happen again.

We will recover the time we have lost. We will progress in every sense. I was talking about nutrition matters. I think this is the last topic I will mention to you on this anniversary. I want to refer to matters regarding food for the mini-brigades.

Since this movement began, we have been making efforts and have been searching for new resources for you. I already explained to you that we have rice, but rice alone does not solve the problem. We will be content if we know we can use rice without using a drop of water or plowing a square inch of land. It is a good business. We have the rice we need, and we will have the food and the vegetables we need. We will also have other things. We have some chicken, we will have...[changes thought] We have some fish. Unfortunately, not everyone will get fish, but in some cases we have good quality fish. There are some swordfish fillets, approximately 15 tons. The people in the social work groups are eating that fish. We will have fish sticks; we are even thinking about buying a machine to make those fish sticks, which taste very good and can be frozen.

However, I have said that food production is not our only priority. We are in a transitional stage. We need from 90 to 100 dining rooms, from 90 to 100 cold storage rooms, and from 90 to 100 freezers. In some places, where the group is small, we could use a freezer instead of a cold storage room. I already asked Max where we need freezers. If necessary we will manufacture the freezers instead of building cold storage rooms. If there are 200 [workers] perhaps two freezers will be enough. If there are more, then we should build a cold storage room. We need cold storage rooms because many of the products are frozen: chicken, fish, and fish sticks. There are several food products that need to be frozen and other food products we need to keep in the cold storage rooms. This is being done as quickly as possible. There are still a few months remaining before we will have all these conditions. The cold temperature is very important in the minibrigades dining rooms. We will provide such conditions for all of them. It is very important.

Thinking about the things we could provide to the minibrigades, I recently asked the industrial sector if we can produce precooked, instant oatmeal. We will talk about that. There is a brand called Quaker, which is eaten by the bourgeoisie, like kings. Perhaps a few workers know about that food. Oatmeal is considered one of the best foods in the world and is digested very easily. It is the best thing for the stomach and is good for your health. Therefore, in many places, it is part of the health program. The Soviets eat it, and the world likes oatmeal very much. I was told we have a large reserve and that it is being sold in the parallel market. I asked how much raw material we have, and they told me we have some, so we can make it. At least we have a few hundred tons available for the minibrigades.

We made a quick calculation of what a good portion would be—how many grams of precooked oats, instant oatmeal, and all of that; how much milk, how much sugar, how to make it taste good without being too sweet. We conducted a test, to tell you the truth. We conducted a test. I do not want to talk at length about it, but I ordered a test to find out how much we would need, because—I said—since we have this food, it would not be right for it to be prepared improperly or for it to be rejected for some reason. It is necessary to explain why. This is not breakfast; this is a morning snack. We can guarantee it is not dessert, because dessert you can make

yourself, but something that many families in the world, many people, eat for breakfast every day. [4-second break in reception] We propose for a 0900 snack, a 20 gram portion—because this was the best formula—20 grams of Quaker oats, 100 grams of milk, and 11 grams of sugar. It is better in a package. The package says 500 grams, but it contains 400 grams. This led to a discussion, because it never measured up. It was never that amount. When they filled the envelopes, they put in 400 grams. That was the cause of a serious discussion with the food industry, because although the packages contained 400 grams, the label said 500.

I said: This is bungling. I had to start an investigation at the enterprise, take measures, get new envelopes. I said: They will have to explain it. At first the 500 grams cost 70 [currency not specified]. Later, the price was reduced, because the package was found to contain less. They were then charging for 400 grams, but the envelope said 500. It was incredible. When I was doing the test, I said: Well, the scale must be bad, because it never went up to 500 grams, and I therefore mistrusted the scale, without suspecting the incredible bungling that was taking place, because if the envelopes could not hold that amount, they should have explained, made changes, and indicated the exact number of grams on the envelope.

This has been the cause of very strong criticism. We encountered this while conducting tests to find the formula for preparing this food. A package called for 2 liters of milk and 2 liters of water. Of course, a test at home is not the same as a test with large quantities. I would say that more water might actually be called for. The formula prepared experimentally had a good color and taste, and it was not too thick, because if one makes it too thick without enough liquid, you could save on cement and use this instead. [laughter] One could save on cement. [laughter]

I say that the formula is important. I have already begun. We began at the work site. I spoke with the head of the minibrigade at the work site. I asked: Have you begun? Yes, it has been well-received; others are still not accustomed to it. I said: I think the following, comrade minibrigadist. We as a people are very uneducated in the area of nutrition, very uneducated. We do not know the value of foods, and the importance [words indistinct]. I say this frankly.

The same thing will happen to us in the area of vegetables. That is why I want to examine this topic here today. We do not know how to eat vegetables. We are not used to eating vegetables. Of course, we could not be used to it, because they were previously unavailable. There were once some vegetable crops here, but they were neglected. Fiber is indispensable for human health. The human organism has developed over hundreds of thousands of years by consuming certain products. Later, when the so-called process of civilization took place, people began to discard the best part of wheat. They prepared refined wheat by removing 30 percent of it, the bran, which is the best part of wheat, the part that contains protein, more minerals, more vitamins, and fiber. Throughout his evolution, man has been eating fiber. Later, civilization came and gave him food without fiber: polished rice, refined wheat. Man was getting practically nothing except starch from the rice and wheat.

The modern world has discovered that many of the present digestive tract ailments, including cancer and (?diverticulosis), result from a lack of fiber. In industrialized countries, increasing emphasis is being placed not only on giving up tobacco, but on the consumption of fiber. In our country, our overall plan involves the use of 100 percent of the grain of wheat, the use of the best part of the grain of wheat. The overall plan consists of 70 percent [words indistinct] of flour, and 30 percent fiber. Practically the entire grain is used.

If our doctors were familiar enough with this, they would recommend it more. Many of them already know what an important factor fiber is in the functioning of the digestive system. It even affects blood pressure and also has an influence on heart disease, albeit an indirect influence. It speeds digestion and absorbs less fat and less of certain unnecessary calories that cause people to gain weight and ultimately become obese. In other words, fiber consumption helps digestion and prevents many serious digestive diseases. I want you to know there is a high percentage of colon cancer, diverticulosis, and other diseases caused by a fiber shortage in our diet. This directly influences our digestive system...[corrects himself] our health and also allows a grater absorption of fats and unnecessary calories. Our digestive system has evolved throughout hundreds of thousands of years...[corrects himself] millions of years; man consumed a given percentage of fiber and then began to eat food that did not contain fiber. If man eats fish, meat, eggs, milk, potatoes, wheat, bread, and polished rice he is not getting the fiber he needs. That is why I thought about precooked oatmeal, which has fiber and 50 percent more protein and vitamins than rice. It is also highly nutritious and is a great medicine for the human body.

I said that we have oatmeal. The problem is whether the people know how to prepare it adequately or not and if the workers understand its benefits. We must send it to the day-care centers. Likewise, we have something else you do not know how to eat: the husked whole grain. This is an excellent dish, it tastes better than rice and has more fiber, but it must be properly prepared. I know because I eat it. This grain is even used as fodder and is cheaper than wheat, but it must be properly prepared. One preparation method is to leave it in water—it is not hard like chick-peas and other things—for 1 day so the grain may open up.

If you knew how to cook it you could learn to eat it. You should start learning how to eat it so you can eat it at least once a week. It is very good and tastes better than rice; it is also more nutritious and has more fiber. Also, we have lots of oats. The country receives 2,000 tons and

approximately 1,200 tons are used to make Quaker [rolled oats] because, of course, 60 percent of the whole grain is used. Therefore, Quaker oats have less fiber than the whole grain. Another option could be used in the future, if the workers want to try the whole grain for lunch or dinner. We have plenty, and it is an excellent dish. However, this requires a certain knowledge to prepare the food. Well, some of the grain could be available in the future from our reserves, and it could also be used to make bread, since we have leftover husked grains—because it is generally husked when used as fodder. The whole grain, like the whole wheat grain, has a higher percentage of fiber. We could try this some day in a municipality or in a restaurant, because none of this is certain until it is tested. Anyway, it is very healthy.

This is closely linked with the vegetable garden. We were trying to come up with a good idea, to guarantee-...[changes thought] based on our experience at the School of Exact Sciences and the International School of China. We began to analyze the idea of having a vegetable garden for the minibrigades. We talked with the comrades in the agriculture sector. Really, we talked to them and looked for the land within 3 days. We already have a 27-caballeria vegetable garden where 30 varieties of vegetables will be produced. There will be tomatoes, cabbage, lettuce, cucumbers, carrots, chard, radishes, beets, and cauliflower, which we grow in small amounts because it is difficult to grow. We will grow all these as well as onions. We will also have parsley, chard—what is the name of this other one—well, radish, celery, all of those things. They will have 30 different kinds of vegetables. This also includes tender corn; 2 hectares of corn will be sowed every 10 days so we can have 70,000 ears of corn every 10 days. This vegetable garden will be handled with computer-like precision, with a plan for each product. We will grow eggplants and string beans: in all, 30 varieties of vegetables. We are currently calculating how much onion should be grown; we were calculating [4-second break in reception] had squash as a vegetable [5-second break in reception]. We will use more hectares to grow more eggplant and onion, and we will have the privilege of sowing more than 300 hectares...20 times 2...plus 60...we will have 300 hectares planted with vegetables. [figures as heard]

As I said before, in the rainy season, we will plant 2 hectares of corn, tomatoes, and other vegetables. In the spring, we will plant 4 hectares. In the rainy season, we will have corn approximately every 10 days. We can eat corn on the cob. Corn has a lot of fiber when it is eaten that way or when it is ground. The fresh, tender corn that has just been harvested can be boiled, or you can make a deep-dish tamale, or you can make delicious corn fritters.

Fresh, tender corn will be available every 5 days. The vegetables that can be produced all year long will be available all year. Okra can be produced all year long. Eggplants, cucumbers, stringbeans can be produced all year long. It is more difficult to produce tomatoes all year long. Some varieties can be produced, others not. Swiss chard can also be produced all year long. We observe that there is a variety of lettuce that can also be produced all year long. We are trying to see if we can produce at least 8 to 10 vegetables all year long.

There will be spinach. Spinach is something that is unfamiliar to some people. It is very good, very rich in iron, and delicious, if well prepared. So what is our problem? What is my problem? We will have a vegetable garden that not even millionaires have—a variety of vegetables all year long that nobody has. I am going to apply this agricultural idea to the capital city, to Havana Province, and create what we could describe as a vegetable garden in the capital. We are already working on the estimates. We are increasing the area in which the vegetables are grown.

Before, there were some mechanisms for production that I cannot figure out. For example, they produced tomatoes only in March, but no tomatoes were available during the rest of the year. Well, I am not going to talk about that. I think the agricultural and vegetable production in the capital must be studied and carried out with the precision of a computer program. The minibrigades know that it is necessary to learn what has to be planted every day in order to have vegetables available all year long. Such planning is similar to that of a computer program.

There are 30 varieties of vegetables and more that must be planted in a certain sequence. It is very well organized. We are also going to have 100 minibrigade workers there, producing foods for the minibrigades. We will have the privilege of having available a supply of vegetables for everything. Even if they do not reside in the area, the contingent working on the roads will also receive vegetables. Even though they are a contingent mobilized by the party, they have the same nature as the minibrigades, although they will be spending more time on road construction programs. Therefore, it is very important to learn the many benefits of these food products. It is important that the food be prepared in a pleasant way. For example, many people do not know how to prepare food well. However, if Swiss chard is prepared with a bechamel sauce, it is great. The other day, during a reception held at the palace, I saw some dishes prepared with chard. I asked the chef how it was prepared. I said: Tell me about this, because if the minibrigade workers endulge in this...[sentence incomplete as heard] [laughter]

Now, about butter: We have butter. If onions—and we will have all the onions we want—are sauteed in butter with flour, with a dash of nutmeg, and then added to chard and spinach, you have an excellent dish. However, you have to know how to prepare it. I do not care if the minibrigade workers—who work very hard—eat more, because they work much more. I do not care if they eat more fat, but a problem arises with the office workers eating great quantities of bechamel sauce. [laughter]

Well, you have to know how to prepare food. You can also make an excellent cream sauce with beets. Perhaps, if you give someone boiled beets, he will not like it; he is not used to it.

Carrots are one of the best foods there are. They are highly recommended. One has to know how to prepare them well. You can have carrots in salads, in a cream sauce, in many other ways. This is one of the foods that helps prevent cancer. I want you to know that it has been scientifically proven that these foods, these vegetables—such as carrots and the various types of cabbages—are very good, and they even prevent cancer. These vegetables provide vitamins.

I am referring to very serious and important things that have to do with our health. The time will come when doctors will carry out only preventive medicine. The truth is that many people are not in the habit of eating carrots, above all, or beets. People have to be taugh to eat these vegetables in one way or another. Some people will like them prepared in one way, others will prefer them prepared another way, such as in a cream sauce or a soup. There are so many ways of preparing vegetables. For the time being, I consider this very important. I am going to meet with all the minibrigades chiefs of the 15 municipalities and the 12 provinces.

I would also like to invite chefs from the minibrigades. [applause] I will talk with them; I will meet with them and discuss what they know; I will discuss with them how they can prepare all these dishes; I will discuss the importance of this, in case vegetables start arriving and we have to send them back, send them to the small markets,if they do not have any.

We will discuss how they will prepare eggplant, for example; whether they are baked of...[changes thought] because great dishes are prepared by mixing eggplant with onions, a dash of garlic, and butter. Excellent eggplant dishes are prepared that way. Eggplant can be fried; it is very good. Eggplant can be lightly simmered and fried. This is the topic I wish to discuss with minibrigade leaders and even with the cooks. It is easy to gather 100 chefs during an afternoon to discuss how they cook, because I know what they prepare. Not much has been done with squid when it is available. Squid filets [words indistinct] can be prepared. We now have large amounts. You are quickly consuming a lot of hake; 10 tons in about 20 days. Smaller hake can be fried whole, because it is difficult to cut filets. We will have fish sticks; I want you to know that we have 50 tons of hake sticks. Since they are ready-made, it is not advisable to eat them every day; you should not eat only fried fish.

We continue to think about all those useful foods. I believe we must consume foods such as Quaker oats, even whole grain—which you should learn how to prepare—tender corn every 5-10 days, and 30 varieties of vegetables. However, all this could fail if the correct procedure is not followed, if there is a lack of imagination, if workers are not taught the virtues of those products, and if kitchen personnel do not know how to prepare those foods.

It is obvious that I will need some time to instill these ideas. It could turn out that eggplant will be best liked; we could then dedicate more hectares to cultivate eggplant and less to another crop. We must take preferences and acquired eating habits into consideration. Of course, we must implement this in child-care centers and in elementary schools.

I believe our workers have an adequate level of education to understand that in a good food program, good food does not only involve amounts, but also quality. We will try to include protein sources that are not scarce. We cannot offer beef [words indistinct] enough. It could be that it will be available for those working on certain social projects and for certain contingents, or when a certain amount is available. We will try to preserve certain things that are not available to everyone for those workers who are working very hard, especially for the contingents and for those involved in social projects. However, we want all minibrigade members to be well nourished.

As part of our social projects, there were six pigs one day at an experimental center, and I wondered what we should do. I said: Send them to the minibrigades. Maximo had the great idea of distributing them in various centers. He arrived where the people of (?Allende) were. They were laughing because this comrade is fat; he is fat, but he is an excellent construction supervisor. Those people and the people of Julio Diaz received a very large, fat pig.

Well, they had a big party. Peasants in the minibrigades skinned the pig with sharp knives until dawn; they fried pork rind. That was a great party. And I say: Look, Maximo, you can get some from some of these centers. I got some and he recently sent it to the child-care center and a few projects. He says that he has sent it to some of them on credit because they still haven't earned the prize. Well, he says some have. But he sent it there. I went over to the Julio Diaz on Sunday. I saw many people there and said: You only work (?half a day) on Sundays. I was told: No, today we are having lunch here. Almost everyone was there; they invited others. They received a very large, delicious pig; it had a lot of meat on its bones. They decided to bake it last Sunday at noon. I just asked how lunch turned out and was told that it was incredible. [laughter] They ate a pig that weighed 200 or 300 pounds; they ate it during lunch last Sunday. Some people fried pig rind and others saved a leg. There is not enough to go around. These occasions call for parties.

We will seek, as much as possible, the resources to feed the minibrigade workers properly, and the vegetable gardens will help us in this. Of course, there will be

special food. Whenever we do not have enough of a certain food for everyone, we will use reserves. Sometimes we bring small quantities of a product—150 or 200 tons.

We have just received some Chinese peaches. We did not receive 1,000 tons, but we did receive over 100 tons. We reserved them for some hospitals, children's hospitals, and the William Soler Center.

We also receive apples. We receive a certain quantity every year. We received thousands of tons last year. Part of this supply was used to make baby food, natural applesauce, for the kids at the children's hospitals. The children's hospitals have appropriated an applesauce quota, but we also made jam out of these apples. There were a few tons of this jam. I do not know if it will be enough for everyone, but at least it will be enough for the social projects. When this year's apples arrive, we will put aside a certain quantity for the minibrigade workers. There will be some apples for the children. Some will be used for canning, and the rest will be distributed to the people.

Everytime we are able to get some of these products, we make it a principle that [words indistinct] the parallel market. Yes, many products are sent to the parallel market. Some of these products, however, may not be sent to it, without any problems.

If we see all this movement—people working 10 hours, making a big effort on Saturdays and Sundays—it is logical that we wish that some of these products, which do not come in large quantities, whould be enough for everyone. A share of these products should be used to feed the workers. There are also factories; don't think that it's just the minibrigades. As often as possible, we take Antillana de Acero and many other factories into account, and we send them these products. However, I follow the principle, for instance, that this contingent that is working [words indistinct].

It is the revolution's duty to seek the best food for these workers. We are not talking about 6-, 7-, or 8-hour work days. We are talking about 10-hour days. Using the work day well, we are talking about 11-, 12-, 13-, and 14-hour days on certain occasions.

I think it is very fair that our country should make the effort to give these workers the best food possible. They need good freezers, dining rooms, cooks, kitchen equipment, spices, onions, and other vegetables so they can eat properly.

Let them eat well. I am going to tell you something else. The other day I found out that there was a little factory that had long been trying to get started. It was going to produce 500 kg of potato chips. Imagine that. That would not be enough to satisfy everybody. I do not know how many grams it would produce daily, maybe 1500 grams. Perhaps it would be a good idea to sell potato chips in some stores or in the parallel market. To do this it would be necessary to build five or six little factories, and the chips would have to be sold at a high price. But how would we build the first one?

I told myself that the best thing to do would be to assign this to the minibrigades. I also told myself that these potato chips come in plastic bags and would make perfect morning or lunch snacks for the minibrigade workers. I said: Let's assign this production to the minibrigades.

Potato chips are sold as soon as they are made; they are sold at production cost. I say this because someone asked me if the minibrigade workers who work nights receive their snacks free. It is appropriate; those people who are working extra hours. However, they are charged for lunches and dinners. We estimated the cost of a serving of oatmeal with milk and sugar to be 8 cents. This is the production cost. There is no profit here of any kind.

The cost issue has been settled. The potato chips will also be sold at a very low price. We are not going to have a parallel market so someone can come and tell us to compare the cost of potato chips in the minibrigades and in the parallel market. There will be no profit there. This is production cost. [Words indistinct] potato chips, and this little factory, too. Everytime something comes up we think: It may be useful. It is not that we will deprive it of a market. Once we see a little factory such as this one functioning, we may say let us buy 105 such factories to market the product and to make profits, but what you will be receiving will be at the lowest possible cost [2-second break in reception]. We are not interested in making a profit. We are interested in producing what is needed. At the same time, we need to keep people from saying: Look, the minibrigade workers do not pay for their things.

We do not want anyone saying that. We want you to have the same facilities other dining halls have in other places. If you are there a few hours on overtime, the there is no reason to charge you for your snacks.

They are not going to charge for the oatmeal given at night. They are not going to charge for the french fries given at night. They will only charge for the snack, lunch, and another snack later. There might be an instance when a contingent working many hours of volunteer labor might not be charged for this evening meal. That is what I think. Members of a contingent having lunch and dinner might pay for their lunch, but I think they should not have to pay for their evening meal. The state should pay for their dinner. That is the way we feel about this. However, we are thinking of how we could give them a good meal, good quality and quantity. I repeat, it will not be the same for the 30,000 as it will be for those working on social projects. There are some things that are not in sufficient quantities for the 30,000. We give the 30,000 as much as we can afford. What we do not have enough of to go around, we give to the contingents and to those

working on social projects. In other words, those working on social projects will have even better nourishment. That is only logical, because they are working for others, and everyone understands that. [applause]

Concerning this program, many new ideas and initiatives have come up. I think some extraordinary possibilities lie ahead for the country. The revolution has never worked only in the capital city. On the contrary, it has given many privileges to the interior of the country. That is why so many needs have accumulated in the capital city.

Today, there is a certain degree of privileges in the capital, but this program that is starting here will grow and expand. Everything that starts here always grows. The minibrigades started here and they grew. The family doctor program started here and it also grew and expanded to other parts of the country. Everything that we try out here in our capital city, in this large political, and revolutionary laboratory, immediately extends to the rest of the country, and we work everywhere else. I believe that, on this anniversary, you deserve deep recognition and very sincere congratulations as the organizers of projects. This includes the capital's party, the people's government, Comrade Maximo, the provincial directorate of minibrigades, the municipal directorates, and the minibrigade groups. What you have done has surpassed the expected goals, and we can see how you have advanced [applause] with concrete facts, because I have no doubt that the 50 day-care centers will be inaugurated, and I believe this is indeed a feat. We have to inaugurate these projects in quantity and quality, as Lezcano and I were discussing. The good thing about this is that the day-care centers have not been constructed with people from other projects; taking them from the Julio Diaz project or from the Allende one in order to place them in this one. Work in housing construction has not been weakened either. The party is the one that has mobilized a contingent of militants; thousands in these past days to be able to meet the day-care centers program's goals.

Not all the polyclinics or schools will be ready. This is a much bigger construction project. We have invested many months to locate the land, study the terrain, and make projections. However, we plan to complete our program in two years. In the 1st year, not all the day-care centers, polyclinics, and schools that we have started to build will be finished; but by the 31 December 1988, we believe that all day-care centers, schools, and polyclinics will be ready; all this in 2 years.

Next year, the number of houses will increase; we will construct 5,000 more than this year. In 1989, we will construct 5,000 more than in 1988. In 1990, we will build 20,000 houses per year for the capital; this includes those of the labor unions, too. [applause] With the measures that we are taking now, we will be able to reach this goal. We will attain this goal and we will demonstrate what can be done. I believe your work has created trust and enthusiasm in our people because they are able to see what can be done in concrete works. It is really worth the energy we are giving to it, because we are going to see the work done, the result of your work. You will see a transformed city.

We are also thinking about paint: where will we get it and what kind will we use? I will ask basic industry workers if they can get raw material and paint, because paint is very expensive. How can we obtain that raw material?

We are solving the problem of white cement. We are seeing the results in the day-care centers: many works of great beauty and great quality. At the end of this year, 300 tons of it will be allocated. Cement factories will be built and will produce quality cement. Next year, 5,000 tons of paint will be obtained for the capital to begin painting many drab and old buildings, and thus change the capital's image.

We have also organized a group of high-level specialists to come up with ideas for the strategic development of the city. These ideas should include what the city will look like in the year 2,000, what type of buildings it will have, including their height and architectural and aesthetic styles. You will have the opportunity and privilege to see before your very eyes how rapidly your capital is transformed through your efforts. This is the same way the country will be transformed. Of course, in Camaguey, Villa Clara, and Tunas, the new projects are much more numerous than the old ones, and this great transformation is immediately visible. In our capital, the transformation is not so notable, because it was already a great city and, moreover, not enough housing and social projects have been carried out here in the past few years. However, although it is a great city, you will be witnesses to and actors in the great transformation that will take place in our capital in the next few years. This transformation will happen thanks to this idea, the mass minibrigades movement, which has become eloquent proof of what the revolution and socialism can achieve.

Fatherland or death, we will win!

Speech on Che Guevara

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[Speech by President Fidel Castro marking the 20th anniversary of the death of Che Guevara at the electronic components factory in Pinar del Rio—live]

[Text] Comrades, almost 20 years ago, on 18 October 1967, we met at Revolution Square with an enormous crowd to pay tribute to Comrade Ernesto Che Guevara. Those days were very bitter, very bitter [repeats himself], very hard. We received news of the events occurring in (Bado del Hieso), (La Cargada del Judo), from news agencies which were saying that Che had fallen in combat.

It did not take us long to realize that the news was absolutely reliable. Even information, photos, appeared that unquestionably seemed to prove the event. For several days we received reports until, with all those elements and without knowing much of what is known now, a massive gathering was assembled to hold the solemn act in which we paid tribute to our fallen comrade.

Since then, almost 20 years have passed. This time, we are not holding the ceremony on the exact day he fell in combat. According to the reliable reports that we have now, in truth, they assassinated him the following day, after he was taken prisoner, unarmed, and also injured. His weapon was lost in combat.

It has almost become a tradition on 8 October to commemorate the anniversary of that event. The lst year passed, the first 5, 10, 15, 20 years passed and it became necessary to hold a ceremony, or rather, it became necessary to recall in all its historical dimension that act and, above all, to recall the principal protagonist of that act in a natural manner, not done with too much thought, not too deliberate, in a spontaneous manner.

All sectors, all the people have recalled that date over the past few months. This 20th anniversary could be commemorated with solemn events such as we have seen here today, the moment of silence, the hymn, the magnificent poem of Nicolas Guillen, which we heard today with the same accent and voice we heard 20 years ago. We could also try to make a very solemn, grandiloquent speech written during a time in which we actually have a lot of work to do. We barely have a minute free to write a speech or even meditate more deeply on all those events and on all the things that could be said. That is why I would rather remember Che during this event by reflecting with you because I have reflected, reflected [repeats himself] very much.

A report was published yesterday in our country on responses made to an Italian journalist. This kept me for almost 16 consecutive hours in front of television cameras, movie cameras, equipment. He wanted to get film clips with superior quality. He did not use a video cassette which lasts about 2 hours, a roll of film lasts 2 hours. Instead, they had to change the film every 20 or 25 minutes. That interview was very tiring. It should have taken us 3 days but, instead, we had to make it in 1 day because there was no more time. It began on a Sunday morning and ended at about 0500 the next morning. There were more than 100 questions.

Of the diverse and various topics discussed during that interview, the journalist was very interested in talking about Che. It was between 0300 and 0400 when we actually discussed that topic. I made every effort to answer each and every question, and I made a special effort to synthesize my recollections of Che.

I told the journalist that I believe that many comrades feel the same way I do when they think of Che. I told him the story of our relations with Che; of the affection and brotherly feelings among comrades who struggled together for almost 12 years, from the moment we met him in Mexico until the very end. I told him the story of Che; much of which was heard for the first time in the past few days. I told him a story that is full of historic, heroic, and glorious deeds. I recalled Che from the moment he joined us on the *Granma* expedition. I recalled the landing and the problems we encountered. I talked about the days when we resumed the struggle in the mountains; the rebuilding of an army starting with practically nothing. I recalled the early struggles and the final battles; the days that followed the triumph of the revolution. I talked to him of our first revolutionary laws which were drafted in strict compliance with our commitments to the people. I also talked to him about the truly radical changes we made in the life of the country.

I also recalled those days when the hostility began, the blockade, and the slander campaigns against the revolution. All this started when we began to use justice against the criminals and henchmen who had murdered thousands of our fellow countrymen. I talked to him of the Giron invasion, the struggle against the mercenaries, the October crisis, the proclamation of the socialist nature of the revolution, the first steps taken toward the construction of socialism during those days when we had nothing.

We had no experience in this field; we did not have cadres, engineers, economists, and we only had a few technicians. I recalled those days when we hardly had any doctors in the country because 3,000 of our 6,000 doctors had left the country. I told him of the days that followed the first and second Havana Declarations; the way our country was isolated; the way all the Latin American countries, except Mexico, broke off diplomatic relations with Cuba. Amid all these problems, we had to organize the country's economy. It was a short, but rich period. It was a period full of unforgettable actions and facts. Lastly, I talked to him of Che's desire to fulfill an old wish, an old idea, to return to South America, to his homeland, to make a revolution based on all the experience he had acquired in our country.

I also recalled the clandestine manner in which he had to organize his departure; the barrage of slander against the revolution. They [not further indentified] practically said that there were problems, differences with Che, and that Che had practically disappeared. There were also rumors that Che had been murdered because of divisions within the revolution. Meanwhile, the revolution remained firm and calm. Despite the bitterness and bad feelings that this campaign created, we felt that it was important for Che to achieve his goal and for us to protect his safety and the safety of the comrades who went with him, the comrades who decided to join Che.

During the interview I explained the origin of that idea. I recalled that when Che joined us he only asked for one thing. He asked that the day the revolution triumphed,

the day he decided to return to South America, there would be no matter of state that would hinder the fulfillment of his desire. That he would not be stopped from doing what he wanted to do. We kept our word; we told him to go ahead and that we would support him. On several occasions—not often, but on several occasions—he reminded us of our promise. And the day came when he felt that he should leave. At that time we not only kept our promise but we also helped him as much as we could in his endeavor.

We even tried to delay his departure a bit. We gave him other tasks that would enrich his experience, and we tried to help him through the most difficult days, those days when he had to organize a guerrilla movement. We had much experience in this field, because we had already gone through this. We knew that Che's talent, experience, and imagination were destined for great strategic tasks. But we thought, perhaps, that other comrades would be able to achieve that first phase of organization on their own and that Che would join them in the advanced stages of the process. This idea had much to do with the system we practiced during the war. We kept our outstanding cadre members for more important and strategic missions. We did not have many of these outstanding cadre members, so when we found one, we would refrain from sending him, at the head of a squadron, on a daily ambush mission, but gave him much more important tasks according to his ability and his training.

I also recalled the days of the last offensive against Batista. Our main cadres were not on the front line heading a squadron. We gave them more strategic tasks to do. We were keeping them for our counteroffensive. It would have been senseless to have men like Camilo and Che heading a squadron. They were being saved to lead columns and other very important missions. During these very important missions they had a great responsibility and had to face many dangers. This was the case of Las Villas invasion. Camilo and Che led this mission. It was a very difficult mission but they had to do it because only men like Camilo and Che, with their experience, could lead those columns and achieve the goal. In view of the results achieved during that operation, perhaps it would have been more logical for Che to wait a while, and join the comrades later in the process. There was no reason why he should be doing all the work from the very beginning.

But he was impatient, truly impatient. Some Argentine comrades had tried to do this work years earlier, and they died pursuing their goals. Among the comrades who died was Ricardo Masetti [as heard], founder of *Prensa Latina*. Che remembered this often and he was truly impatient to do his work. Because we always kept our promises, because we always respected his viewpoints—ours were relations based on absolute trust and brotherhood despite our ideas regarding the perfect moment for him to join the struggle—we gave him all the help he needed to begin his struggle.

Then came the news of fighting; we lost contact with them during a very difficult moment in the organization of that guerrilla movement. The enemy detected the movement and for the next few months the news we received from the area came from the international news agencies. We had to interpret those dispatches. Our revolution has really learned how to interpret the international dispatches to know when they are reporting the truth or when they are distorting information.

I can still remember when we learned that Joaquin's [not further identified] group had been killed; when we learned that Comrade Bilo [not further identified] had been killed. When we received the dispatches we analyzed them and I reached the conclusion that they were reporting the truth. We realized that the dispatches were reporting the truth because they explained how the group had been killed while crossing a river. Our guerrilla experience, all that we had been through, told us that it was possible to kill a whole group of men while crossing a river. In their dispatches the reporters described how the group had contacted a peasant, that the peasant had alerted the Army, and that they had been ambushed while crossing a river. The dispatches also described that there had been shooting and provided more details about what happened. The description was so accurate that we could have no doubts. Not believing these dispatches would mean that the reporters who distort information, who many times distorted information, were intelligent enough and had enough experience to invent the exact circumstances under which a complete group could be eliminated. Therefore, we reached the conclusion that the information we were receiving was true.

These long years of revolutionary experience have taught us to read between the lines of a dispatch; to distinguish when they are telling the truth or when they are distorting information. But that was the only information we had until we received the last reports on Che's death.

As we have said before, we still had hopes that even under the most difficult circumstances, that even if only 20 men were alive, that there was still a possibility for the guerrilla movement. They were heading into an area where there was an organized movement, where some outstanding Bolivian cadres had some influence. To the very end we kept hoping that the movement would consolidate and develop.

I explained to the journalist the peculiar nature of our relations with Che; the peculiar nature of this story. I told him that it was one of those cases where one feels that Che has not died, that he is still living. He had been such an exemplary man, such an exceptional and unforgettable man. He had a very peculiar nature. I explained to the journalist that we sometimes dreamed—we all dream with our work and other things—that we were seeing Che, that Che was back, that he was alive. I have had this dream many times. I also told the journalist some things we usually keep to ourselves; things that when told at a certain moment will give you an idea of

this man's personality and also to what extent we still feel that Che is alive, that he is still here with us. He is here in his ideas, actions, examples, in all that he created. He is remembered by the world, not only in Latin America, but in Europe, around the world, where, as we said on that 18 October, 20 years ago, he has become a symbol for all the oppressed and exploited people, for all the patriots and revolutionaries. Because of all this, his spirit lives in our spirit.

Even though 20 years have gone by, when we hear his poem, when we hear our national anthem and taps being played, or when we open our newspapers and see the photographs taken of Che, a face so familiar throughout the world, we also see Che as a man who had every human and moral virtue and quality to be considered a symbol, a man who had all it takes to become a symbol. We see his eyes, we see strength in his eyes; we see a face that reflects character, determination, and purity. Therefore, when we open the newspapers and see the poems written about him, the stories told of him, and the stories being repeated once again, we cannot help but feel that Che still lives, that he is present, and that there is nothing strange in thinking, or even dreaming, that he is alive, that he is still active, and that he never died.

In the long run, we have reached the conclusion that Che never died and that he is currently more alive than ever; more present that ever; influencing us more than ever; and a more powerful adversary than ever.

Those who made his body disappear to keep it from becoming a symbol; those who, following the orders and methods of imperialism, refused to leave a single trace of him to be found, have realized that, even though there is no known tomb, remains, or body, he continues to be an adversary of imperialism. He has become a symbol, a force, and a presence. They proved their weakness and cowardice when they made Che disappear. They also showed us that they were afraid of his example, that they were afraid of that symbol, and they did not want the exploited peasants, laborers, students, intellectuals, democrats, progressive sectors, and patriots of this hemisphere, to have a place where they could go and pay tribute to Che. However, in today's world, where there is no one specific place where tribute can be paid to him, Che is honored throughout the world. [applause]

Nowadays we do not honor Che once a year, or once every 20 years. Today we honor Che every year, every month, everyday, and everywhere. We honor him at the work center, at school, in a military unit, at home. The children, the Pioneers, honor Che everyday, and have done so for the past 20 years. No one knows how many millions of times our Pioneers have repeated their slogan: Pioneers for communism; we will be like Che. [applause] This custom, in itself, represents a great tribute and I feel that not only our Pioneers, not only our children, but all the children of our hemisphere and the world, could repeat this same slogan: Pioneers for communism; we will be like Che. [applause]

The truth is that we could have no better symbol, no better image, or more precise idea, in our search for the revolutionary and communist man. I say this because I am convinced, and have always been convinced—perhaps today more than ever—that when I spoke on that 18 October and asked how our fighters, revolutionaries, and militants, and children should be, I said that they should be like Che because Che is the image, the personification of that new man, of the kind of human being that we need if we are going to speak of a communist society and if we are [applause] truly bent on building, not only socialism, but a more advanced phase of socialism. Che is the type of man we need if humankind refuses to renounce the beautiful and extraordinary idea of someday living within a communist society. If there is a need for a paladin, if we should find ourselves needing an example to follow to achieve the high goals we have, then we need more men like Che; we need more men and women who will follow in his footsteps; men and women who will be like Che, think like Che, act and behave like Che. [applause] We need men and women who will be like Che when performing their duties, be like Che in every detail, in every activity. Men and women who will copy his working spirit. Che taught and educated the people with his example; he was always the first to volunteer for any task, for the hardest and most difficult tasks; he gave himself, body and soul, to a cause; he gave himself, body and soul, to others. He was always there when support was needed, he never abandoned a comrade. He led an austere life; he was unblemished; there were no contradictions between what he said and what he did, between what he practiced and what he preached. There was no difference between the man of action and the man of thought. [applause].

It is a great honor and privilege for our country to have, among its sons—even though he was not born here, but he won the right to be called a son of this land and to consider himself a son of this country—it is an honor and privilege [Castro repeats himself] for our people, our homeland, our history, and our revolution, to have had, within its rank and file, a man like Che. A truly exceptional man. I am not trying to say that exceptional men are hard to find; I am not trying to say that among the masses there are no exceptional men and women. I once said that there are hundreds, thousands, and even millions of exceptional men and women; I said this during those difficult days that followed Camilo's disappearance. When recalling Camilo's life, I said that there were many Camilo's among our people. I could also add that among our people, among the Latin American people and the peoples of the world, there are many Che's. But why do we call them exceptional men? Because in the world they lived in, in all the circumstances that surrounded their lives, they were able to show all that man, with his generosity and solidarity, is capable of doing. They had this chance. Very few times in our life will we see a man having such a chance to express himself and give of himself as Che did.

Among the people there are many men and women who, as a result of the example they have received from other

men and because of their values, are capable of heroism. They are capable of a type of heroism I admire greatly, the silent type of heroism, the virtue of remaining anonymous. But the kind of circumstances that create men like Che, who has become a symbol for the world, are not common, and our revolution must be proud that this symbol, this man, was born from the heart of our revolution.

As further proof of what I said earlier about Che's presence I could ask: What more timely moment to honor Che with all our strength, our deepest recognition and gratitude, than a date like today, an anniversary like this one? What better moment than this, in the midst of our rectification process? And what are we rectifying? We are rectifying in fact all those things—and they are many—that had turned us away from revolutionary spirit, creativity, virtue, effort, and responsibility. Things that turned us away from the spirit of solidarity among men. We are rectifying all kinds of shoddiness and mediocrity, which were in fact the negation of Che's ideas, revolutionary ideals, style, spirit, and example. I sincerely believe—and I say this with full satisfaction—that if Che were sitting in this chair here, he would be truly happy to see what we are doing. And he would have felt very unhappy during that uncertain, shameful time when a number of ideas and mechanisms and vices prevailed here in the construction of socialism. They would have caused him deep and terrible bitterness. [applause]

For example, Che created the idea of voluntary work. This was one of the best things that he left for us in his passing through our homeland, and in his participation in the revolution. However, the idea of voluntary work was being left to one side. The words voluntary work were becoming more of a formality; it was only a date; it was something to be done in a hurry on a Sunday. It was a way to do things in a disorganized manner and what prevailed was more of a bureaucratic and technocratic spirit. We had begun to think that voluntary work was not important or essential; that voluntary work was a silly thing and a waste of time. We had begun to think that we had to solve our problems with overtime, more and more overtime, when we were not even using our regular working hours properly. We had fallen into the bureaucratic and technocratic swamp. We had inflated payrolls; we were following anachronistic guidelines; we had stooped to tricks and lies. We have fallen prey to many vices that would have truly horrified Che.

Had Che been told that one day, within the Cuban revolution, there would be enterprises that in order to make a profit would steal, he would have been horrified. [applause] Che would have been horrified to learn that in order to make a profit and distribute awards, and other things, these enterprises would sell the materials they received to build and charged for them as if they had actually built something. I am telling you that this happened in the 15 municipalities of the Republic's capital city. This happened at the 15 housing maintenance enterprises, to mention only a few. They reported profits of 8,000 pesos a year, but when we stopped all this, they were only reporting 4,000 pesos a year. They were no longer profit-making enterprises. They were only profit-making enterprises when they were stealing.

Had Che been told that there would be enterprises that would pretend to be abiding by the plan, and surpassing the plan, when they were actually reporting their January production figures as December production figures, he would have been horrified. Had he been told that we would have enterprises that surpassed their goals and later offered awards because there had been a profit—they made a profit but did not meet their goals of creating a variety of products since they only produced what they could sell at a higher price, even if these products were useless, even if these products were useless without another product to complement them—Che would have been horrified.

Had Che been told that we would have very lenient, soft, and immoral goals, that almost all of our workers could surpass two and three times over, he would have been horrified. Had he been told that money would turn into man's main motivation, he, who many times warned against this, would have been horrified. Had Che been told that millions of overtime hours would be put in and that the regular work schedule would not be respected, that the mentality of our workers would be corrupted, and that our men would have the sign of the peso imprinted in their minds, he would have been horrified. He knew that we could not march toward communism along this path. He knew that if we followed this path we would have to forget our idea of human solidarity, and even forget our idea of internationalism. He knew that along that path we would get nowhere.

Had Che been told that one day we would be paying bonuses and more bonuses, all types of bonuses, and that this would have nothing to do with production, he would have been horrified. Had Che been told that a group of our enterprises would be full of shoddy capitalists, as we would call them, who play with capitalism, who begin to think and act as capitalists forgetting the country, the people, and quality—as if quality was not important and that the only important thing was what they got out of this—he would have been horrified. Had Che been told that the day would come when the manual worker—a man who does work that demands some technique like cutting cane—the intellectual worker, the radio and television worker, would be also be acting like capitalists, he would have been horrified. I honestly feel that if Che had been told that our surgeons would get involved in the profit making business, removing every piece of tripe they could find in order to earn two or three times more money, he would have been horrified. [applause]

That path, that path [Castro repeats himself] will never lead to communism; that path only leads to alienation and all the vices of capitalism. That path, I repeat—and

Che was quite aware of this—would never lead to the construction of socialism, to the early stages in the construction of communism.

Do not think that Che was naive, that he was an idealist, a man who was not aware of the situation. He understood the situation. However, Che was a man that believes in man; and if you do not believe in man, anyone who thinks that man is an incorrigible little animal who can only walk if grass is put in front of him, if a carrot is dangled in front of him, or if you beat him with a stick, anyone who thinks in this manner, anyone who believes this, will never be a revolutionary. Anyone who thinks this, and believes this, will never be a socialist. Anyone who thinks this, and believes this, will never be a communist. [applause]

Our own revolution is an example of what faith in man means. Our own revolution was born from zero; it was born from nothing. We did not have weapons, we did not have a single centavo, the men who started the struggle were unknown, and in face of all that power, the millions, the tens of thousands of soldiers, the revolution was possible because we had faith in man. Not only was the revolution possible, but it was also possible to achieve victory and confront the empire; it was also possible to be here today, nearing the day when we will celebrate the 29th anniversary of the triumph of the revoltuion. How could we have done all this without having faith in man?

Che had great faith in man. He was a realist but he did not reject material incentives. He considered this as something necessary during the period of transition in the construction of socialism. However, Che gave much more importance to the factor of awareness; he gave much importance to the moral factors. We would be mocking Che if we were to say that he was not a realist and was not aware of this situation. However, Che is mainly known as a man of action; as a soldier, a leader, guerrilla, as an exemplary man. A man who was always first to volunteer for anything; a man who never asked anyone to do something that he would not do first. He had his virtues; he was honest, pure, and he always offered his solidarity. He had all the virtues that we remember him by and made us get to know him. Che was a man of very deep thought.

He had many opportunities during the early years of the revolution. Because of his outstanding qualifications, every time we needed a man to fill an important office, we called on Che. He was truly a man of many talents. No matter what kind of task was assigned him, he would do his best and carry it out with utmost responsibility. He was appointed to the INRA [National Agrarian Reform Institute] before the industry was nationalized and when only certain factories had been intervened. Among the many other offices he held, he was appointed to the National Bank and he also was appointed to head the Ministry of Industry when this organization was created. By that time almost all the factories had been nationalized and we had to organize all of them and maintain our production. Che undertook this task as he had done on many other occasions with other tasks. He totally dedicated himself to his work; he worked days, nights, Saturdays, Sundays, many hours, and decided that he was going to resolve the problems. This is when he started applying the principles of Marxism-Leninism to the organization of production. He did this with his knowledge of the matter and he spent years working on this. He talked much about this; he wrote much about this. He actually developed a pretty elaborate, and profound, theory about the way that, according to him, socialism should be built and how to advance toward the communist society.

Just recently an economist wrote a book—and received an award for it—in which he compiled Che's economic ideas; an important field, a decisive field. This book is called: *Che's Economic Thoughts.*

We remember much about Che. However, I feel that his economic knowledge is not something that our people know about. Che had truly brave, audacious, and profound ideas on this matter. Many of his ideas differed greatly from the conventional economic ideas. But in essence, Che was radically opposed to the use and development of capitalist economic laws and categories in the construction of socialism. He suggested, and we have insisted on this on several occasions, that the construction of socialism and communism, is not only building and distributing wealth; it is also a matter of education and the creation of awareness. Che was totally opposed to all those categories that were transferred from capitalism to socialism as instruments for the construction of socialism. There came a time when Che's ideas were misinterpreted and not implemented properly; ideas, that were totally opposed to Che's economic thoughts, were imposed. This is not the time to expand on this issue. I am only interested in expressing one idea.

Today on the 20th anniversary of Che's death, today, amid this deep process of rectification we have undertaken [sentence not completed]. Rectification does not mean extremes, rectification cannot mean idealism, rectification cannot imply lack of realism, rectification cannot imply abrupt changes, and rectification, as I have said, on several occasions, means looking for new solutions to old problems. Rectification means correcting many negative trends which were developing; rectification means putting what we have to better use. Like we said at the meeting with the enterprises, this system, the system for the directing and planning of the economy, was a horse, a hag, lame, with many harness sores. Now we are applying Mercurochrome and medicine to the sores, putting a splint on the leg, fixing up the hag, and fixing up the horse, but we had to continue with that horse.

Knowing the bad...the horse's bad habits. The deviations and dangers of the horse, the horse's kicks, the horse's bucking, and we must try to guide the horse on our path

and not go merely where the horse wants us to go. As I said, we must control the reins; we must control the reins. [repeats himself] [applause]

These things are very serious and very complex, and we cannot loll around or go about seeking adventure if the experiences of so many years are to be worth anything. Some of us have had the privilege of living through a revolutionary process. That is why I now say that we cannot fulfill the plan through high principles alone, but with supplies. We demand this, and whoever does not wish to fulfill this plan can leave immediately, because he will have no other alternative. [applause]

As I said, projects have to be initiated and completed quickly. What happened to us with the old horse must never happen again. That business of digging the earth and implanting a few columns because the earth was worth a lot, without ever completing a building because the building was worth too little—that tendency of saying: I was true to my high principles, but I did not complete a single project—has resulted in our sinking hundreds of millions, thousands of millions into projects without ever completing anything.

Fourteen years to build a hotel, 14 years burying sand, stones, cement, paste, fuel, working before a single cent benefited the country. Eleven years to finish our hospital, but it was finally completed, and with quality. This is not the way things should be done. The minibrigades that were destroyed in the name of these projects are rising phoenixlike from the ashes and demonstrating the significance of this movement of masses, the significance of this revolutionary way to solve problems that the theoreticians, the technocrats, those who do not believe in man but who do believe in using cheap labor had controlled and destroyed. Those technocrats were leading us into a critical situation in the capital where, at one time, they had emerged. It is painful to think that more than 15 years ago an excellent solution for a critical problem had been found in the midst of destruction. In Cuba we did not even have the strength to build houses in the capital. The problem grew. Dozens of housing units were propped up, in danger of toppling over and sacrificing lives.

Now that the minibrigades have been formed, there are more than 20,000 new houses in the capital. They do not contradict the old horse. They do not contradict the economic planning system. The factories that send the minibrigade workers pay them, but the state funnels back the minibrigade workers' salaries to the factories. The only difference is that in the factories the minibrigade worker was working only 5 or 6 hours, and here he works 10, 11, and even 12 hours. One minibrigade worker can do the work of two and even three men. This way the enterprise saves.

Our cheap capitalist cannot say that his enterpise is being ruined. On the contrary, he can say: I am producing the same with 30, 40, 50 less workers. I have to pay fewer salaries. I am going to make more profits or have less losses. I am going to pay more bonuses because now I am reducing my salary cost. And then he continues to rationalize, gets housing for the workers, and the workers feel happier because now they have houses. Then he builds social projects and day-care centers for working women, for their families; he builds special schools, so many useful things. Today the state does all this without spending a single penny more in salaries. This is a miracle!

I could ask the cheap businessmen and capitalists, those who have blind faith in the mechanisms and requirements of capitalism: Can you perform this miracle? Could you build 20,000 houses in the capital without spending a single penny in salaries? Could you build 50 new day-care centers without spending an additional penny? In the past only five were to be built, but never were built, every 5 years. There was a time when 19,500 women were waiting for day-care centers and no one knew when they would be built because it would have taken 100 years to satisfy the demands for day-care centers. By then, cheap capitalists, technocrats, and bureaucrats would, fortunately, have died. [applause] They would have died. They would have never seen day-care center No 100. Now, the workers in the capital will have 100 day-care centers in 2 years, and the workers in other parts of the island will have the 300 or so that they need. Now 70 or 80,000 workers will easily increase their production. And not a single penny more will be paid and no labor will be imported. If payrolls are inflated everywhere, the cheap capitalist will end up having to bring labor from Jamaica, Haiti, or some island; from some of these places. They are the only places they can go to.

Today, it has been shown that in the capital we could mobilize one out of every eight workers. I am sure of that. But we do not do so because there would not be enough material to give to 100,000 workers, each of whom does the work of 3 men.

We are witnessing impressive work deeds, work feats. This is achieved with mass methods, revolutionary methods, communist methods, by taking into consideration the interests of the people who have needs, the needs of the factory, and the needs of society.

I do not want to pass judgment on theories, although there are some I prefer. I know what I believe and what I could believe. I also know what I do not believe and what I could not believe. There are many debates in the world today. I only ask with modesty, in the midst of this rectification process and struggle, that we will stay with this old nag as long as it walks and as long as we cannot replace the old horse for something better. And I say nothing will be done well if it is done hurriedly. I ask with modesty on this 20th anniversary that Che's economic ideas be made known [applause] here, and in the world—in the developed capitalist world, in the Third World, and in the socialist world. Let it be known there

also. The same way we read many manuals and books of all kinds, the socialist camp should also know of Che's economic ideas. Let them be known. I am not saying: Adopt them. We do not have to meddle with that. Everybody must adopt the ideas, the theories, the theses they find most appropriate, the ones that they find most suitable.

I absolutely respect everybody's right to use the method or system they find most suitable.

I absolutely respect this right. I simply ask that Che's economic ideas be known in a cultured country, a cultured world, a world in which ideas are discussed. [applause] I even ask our economics students—there are so many of them and they read all kinds of pamphlets, manuals, theories, capitalist categories, and capitalist laws—to enrich their culture by studying Che's economic ideas. Whoever believes that there is only one way of doing things shows a lack of culture. All I ask, all I request is a little bit more culture; this is attained by studying other viewpoints, Che's viewpoints, which are so respected, dignified, and coherent. [applause]

I cannot imagine that our future economists and our future generations will act, live, and develop themselves as another species of animals—in this case as mules. Blinders are put on the mules so they cannot look to either side; likewise, the mules are shown that [pursuing the] grass and the carrot dangling in front of them is the only acceptable philosophy. You should read a lot; you should avoid becoming intoxicated with only certain ideas. You should also take other ideas into consideration; you should analyze them and meditate about them. If we talked with Che and told him: Look, everything that we had previously analyzed and that had happened with the construction, supplies, quality, and everything else, has happened again. Che would have said: I told you so; I told you so [repeats]. Che would have said: I warned you. Precisely what I thought would happen has now happened. This is simply the truth. [applause]

I want our people to be people with ideas, notions, and concepts; they should analyze these ideas, meditate about them, and even discuss them. I consider this essential. Some of Che's ideas referred to our situation at that time. He felt that when a standard was surpassed, the resulting income should not surpass that of the next higher category. He wanted people to study, and his overall concept was that people should strive to improve themselves. Today we have a more educated, more cultured people. We could discuss this idea with them and decide if the resulting income should surpass that of the next higher category, or the next, or the next! We could discuss isssues more closely related to our situation, to a more educated people, to people with a better technical preparation. However, some of Che's ideas could be fully and totally implemented nowadays. I am fully convinced that Communism cannot be built without those ideas, including the one that man cannot be corrupted or sold out; or the idea that socialism and communism cannot be built if you do not have a [social] conscience but simply think about producing riches. [applause]

I think that many of Che's ideas, many of Che's ideas [repeats] could be fully implemented nowadays. Furthermore, if we had studied, if we study, or if we ever study Che's economic ideas, we could possibly be 100 percent more alert. We could even be prepared to lead the horse; and if the horse tries to turn right or left—anywhere that the horse tries to turn, because it is undoubtedly a horse, albeit a rightist horse—we could strongly pull on the reins and guide him along the road; and we could goad him with the spurs if he refuses to budge. [applause] I believe that a rider—meaning an economist, a party cadre, an administrative official—would be better equipped to guide the horse along the right road if he studied Che's ideas.

The sole awareness of Che's ideas and thoughts-...[changes thought] because one can tell whether one is doing right or wrong, one can tell whether something is the result of this or that, as long as the system and mechanisms to build socialism and communism reach true development and improvement. I say that because I am deeply convinced that if we ignore that idea, we would hardly advance at all and it would be very difficult to attain a revolutionary socialism, socialism with socialists and a communism with communists.

I am absolutely convinced that it would be a crime to ignore those ideas. That is what we tried to explain. We all have enough experience to know how to do things included in Che's ideas and thoughts. Those ideas include very valuable things, things that have an immense value that transcends Che's image among many people. He is seen as a brave, heroic, and pure man. He is seen as a saint, because of his virtues. However, Che was a revolutionary, a thinker, a man of doctrines and great enlightenment, who was able to produce methods and ideas that are undoubtedly essential to the revolution.

Capitalists feel very happy when they speak of profits, revenues, interest rates, premiums and super premiums. When one starts talking about markets, supply and demand, and all those things...[changes thought] because they say this is mine, this is my philosophy and my doctrine. They are happy when all emphasis is placed on those things, because they know that those are essential aspects of the theories, laws, and categories of capitalism.

A few capitalists criticize us. They try to make people think there is no realism in our doctrine. They want people to go after all the traps set up by capitalism. They aim their cannons at us, but we will see how far we can get even if we are traveling on a horse covered with sores. We will see how far we are going to get. We will lead that horse well, even if we only have a horse covered with

sores. We will see how far we can get in this rectification process with the things we are doing now. Therefore, today on this 20th anniversary of Che's death, I call on our militants, our youths, students, and economists to simply learn about, learn about [repeats himself] Che's political and economic ideas. Che is a very prestigious figure and he will have an increasing influence on us.

Obviously there are frustrated people who dare to fight Che's ideas, call him names, and make him appear naive—an unreal person. That is why we want our youths to have that instrument, that weapon, in their hands even if for the time being it only tells us what paths we should not follow, increases our culture, forces us to think about things, and strengthens our revolutionary thoughts.

I sincerely believe that more than what a formal ceremony and honors can do for Che, our best tribute to him is the actions we are carrying out now.

It is with deeds that this work spirit can be seen in so many areas. This province has many examples of this. The workers in (Villales) are laboring 12 or 14 hours a day building minidams [micropresas], starting and finishing them one after the other, and building them at half cost. For that reason, we can say that when compared with other projects, if we were to use a capitalist term—although Che was even opposed to the use of capitalist terms to analyze the implementation of socialism—but still, were we to use the term profitability, we could say that those men in the brigades building that (Villales) minidam have a profitability rate of over 100 percent [applause] a profitability rate of over 100 percent. [repeats himself]

Something that Che gave absolute, total, and utmost attention to was accountability; that is, the analysis of expenditures and costs down to the last cent. Che could not envision building socialism and handling the economy without adequate organization and control and total accountability for each expenditure. Che did not imagine development without increasing work productivity. In fact, Che studied mathematics to apply mathematical formulas to control the economy; mathematical formulas to measure the economy's efficiency. More than that, Che envisioned administering the economy with the rules of applied mathematics as the essential, fundamental, and decisive ways to measure efficiency. Those men have made their contribution. For each peso spent, they produce 2 pesos. For each million spent, they produce 2 million. For that reason, those working at the Guama Dam, the canal [not further identified] at the Pinar del Rio Highway, at the [words indistinct] those that have begun to work in the city. [sentence as heard] There are a number of workers collectives that are achieving outstanding results. These men are men with a sense of pride and honor, men with discipline, men loyal to work. They are extremely productive.

Recently, we met with a group that is building a road. All of them are party members. There are approximately 200 youths and outstanding workers. They are the sort of men to whom we have to say...[changes thought] linking their pay to their productivity—and I am not saying that the linkage is bad because there are a number of activities in which this linkage is absolutely proper [sentence as heard]. Since these men are in trucks [as heard] we do not have to tell them to work more; we have to tell them to work less. You are doing a lot of things. You are doing too much. There are men whom we have to tell to work less. These are men to whom we would have to say: Make fewer trips because if you were traveling at the right speed you could not make 25 trips, but 20. We do not want you to kill yourselves. We are not just interested in what you do but in the quality of your work. We tell them: We are more interested in quality than quantity. [applause] Quantity without quality amounts to squandering resources, work, and materials. We have many of them [not further specified]. The commitment to water projects that we lost—during that period which we could call the days of shame, the shameful period in which no project was ever finished—is being renewed. Pinar del Rio Province is the vanguard of the renewal of the commitment to water projects. [applause]

The brigades are working with the same spirit in the mountains. This same spirit guides our willingness and determination to renew our water power and improve our highways; this determination is spreading throughout the entire country. We also aim to upgrade and improve efficiency in our economy, factories, agriculture, and hospitals.

Fortunately, in the past few years, many knowledgeable and experienced people have emerged; university-level and middle-level technicians. How does what we have today compare with what we had during the first few years of the revolution when Che was health minister? How many engineers, technicians, and project planners did the country have? Today, we have approximately 20 times as many.

How much could have been done had he had at his disposition all the experience and personnel that we have today? As for the medical sector, we had only 3,000 doctors at that time; we have 28,000 today. At present, day after day in our 21 medical schools, we are graduating as many doctors as those who stayed in the country; what a privilege, power, and strength. Beginning next year, we will be graduating more doctors each year than the number of doctors who stayed in the country.

Will we or will we not be able to fulfill our goals in the public health sector today? The doctors who leave for the countryside, for the mountains, for Nicaragua, Angola, Mozambique, Ethiopia, Vietnam, Kampuchea, and the ends of the earth are the doctors the revolution has been preparing [applause]. I am sure that Che would be proud; not of the shoddy work that has been done or all the peddling that has taken place, but he would feel proud of

the cultural and technical level of our people; proud of our teachers who left for Nicaragua, approximately 100,000 who volunteered to go to Nicaragua. He would be proud of our doctors, who are willing to go anywhere in the world; proud of our technicians and our hundreds of thousands of compatriots who have fulfilled internationalist missions. [applause]

I am sure that Che would be proud of that spirit as we all are. However, we cannot allow what we have created with our minds and hearts to be trampled. This is the objective: To use all these resources and strength we have created to make progress and take advantage of all opportunities afforded by socialism and the revolution to move man to take action. I wish to know whether the capitalists have the kind of men that I have mentioned here. One must meet with our internationalists and workers to find out how they feel and think; to confirm that they love their work. They are not working because they are workaholics but because they must recover time lost during the years of the revolution; time lost during almost 60 years of false republic, of neocolonial republic; time lost during a century of colonialism; we must make up for that time. There is no way to achieve this other than by working hard. We cannot spend 100 years to build 100 child care centers if can achieve this in 2 years with our work; we cannot wait 10 years to establish 350 of them if we can achieve this in 3 years with our work in the entire country; we need not wait 100 years to resolve the housing problem if our work, stones, sand, material, petroleum [corrects himself] our cement produced with our petroleum, and steel produced by our workers allow us to achieve this in a few years.

As I said this afternoon at the hospital ceremony, the year 2000 is just round the corner; we must establish ambitious goals for the year 2000; not for year 3000, 2100, or 2050. We must say to those who suggest this: You can settle for that but we cannot! We must fulfill our historic mission of creating a new country, a new society. We have the historic mission of conducting a revolution and developing the country. We have the honor and the privilege, not only of conducting development, but socialist development, and of working for a more humane society, for a superior society. To those who encourage laziness and frivolity, we will say: We will live longer than you, and better than you, or better than we would if we lived like you. We will live longer than you, and we will be healthier than you, because as a result of your laziness you will become a sedentary and obese person, you will have heart and circulatory problems and all kinds of calamities. Work is not harmful for your health, it is good for your health, it protects your health. Therefore, we want these men who are good workers to become models. We could say that these men are following a slogan that says: We will be like Che! Work like Che worked! Work like Che would work! [applause].

When we were trying to decide where this ceremony would take place, there were many possible places. It could be in the capital, at the Plaza de La Revolucion, it could be in any one of the provinces, it could be in any project or factory whose workers want to be named after Che. We analyzed and reviewed the matter, and we thought of this new and important factory which is a pride for Pinar del Rio, but not only for Pinar del Rio, but for the entire country. It is an example of what can be achieved through progress, studies and education. Young workers in this province have been capable of handling such a complex and sophisticated industry, and proof of this is that the rooms where these circuits are made, where they are pressed, must be 10 times cleaner than an operating room in order to obtain the required quality. What good construction and work they have done, what a good quality and team work, what a marvelous job the people of Pinar del Rio are doing there! [applause]. When we visited and toured the factory it was an unforgettable experience, which we conveyed to many comrades in the Central Committee. We told them what was being done at this factory, what was being done at the machine factory—an industry that is also quickly growing—what was being done in construction. We saw the future of this industry as a parts producer with modern technology, which will have a great impact on the development, productivity, and automation of production. When we saw the factory and the ideas that develop and are implemented at this factory we thought that it would become a great complex with thousands of workers and that it would be a source of pride for this province and for the country. During the next 5 years, more than 5 million pesos will be invested in order to make this a huge industry. When we learned that its workers wanted this factory to be named after Che, who cared so much about electronics, computer science, and mathematics, our party's directorate decided to hold the ceremony commemorating the 20th anniversary of Che's fall here [applause], and that this factory would have the glorious and beloved name of Ernesto Che Guevara [applause]. Effective today, its young workers, its dozens and dozens of engineers and hundreds of technicians will honor his name and will work as they should.

When we talk about work we do not imply that this simply involves working 14, 12, or 10 hours. Sometimes working 8 hours in certain sectors is an accomplishment. We have seen comrades, particularly women, working in microsoldering. That is a tough job, a tense job that requires tremendous precision and work. We cannot imagine how these comrades can work 8 hours and put out 5,000 microsolderings in a shift. Comrades, we do not think that you should always work 12-14 hours. There are activities where you cannot work 12-14 hours; activities where you cannot even work 8 hours. We hope things will change someday. We hope that we will eventually be able to implement 6-hour shifts when an 8-hour shift is too much, provided we have the necessary work force—and we will—and that the workers are properly trained.

What I mean is that we can also honor Che's example and name by working well and thoroughly, implementing quality control, training workers in several tasks,

avoiding excess personnel, organizing ourselves and developing the workers' conscience. I am sure that the workers in this factory will earn the honor of having this electronic components plant named after Che. [applause] We are also sure that this province has earned the honor, and will safeguard this honor, of hosting this anniversary celebration. [applause]

We must also mention something else: Despite the problems, the small amount of convertible foreign exchange, factors that we have already explained—the drought, and increased imperialist blockade—I feel secure and optimistic because I see how the people react and how other alternatives are found. I am fully convinced that we will attain whatever goal we set for ourselves! [applause] We will do it with the people; we will do it with the masses; and we will do it with the principles, shame, and honor of each and every one of our activitists, workers, youths, peasants, and intellectuals! [applause] I say this with satisfaction here and today. I say it today, when we honor Che as he deserves; when we pay tribute to his name as we should. If he lives forever, the homeland will also live forever! [applause] If he has become a stronger adversary, the homeland will also become the strongest adversary ever against U.S. imperialism. The homeland will also become stronger than ever against U.S. imperialism and its corrupt ideology! [applause] We have chosen the road of revolution, a socialist revolution, the road of communism, the building of communism; and we feel prouder today because we chose that road, because only that road is capable of forging men like Che, and forging a nation comprised of millions of men and women who are capable of being like Che! [applause]

Marti once said that there are men who have no shame, but there are also men who bear the entire world's honor within themselves... and that man is Che! [applause] Homeland or death! [crowd shouts: We will win!] [applause]

Playa PCC Meeting Speech

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["Closing remarks" by Commander in Chief Fidel Castro, first secretary of the PCC Central Committee and president of the Councils of State and Ministers, at the PCC municipal meeting in Playa; date not given—recorded]

[Text] I believe we have been examining our problems, but we have also been examining our efforts. The reports are good. They convey the already substantial results of our work. I have been very happy to hear the comrade speaking about what was discussed here in this meeting. . (?We) only need a bit of time. We are going to move fast. That can be clearly seen.

The party comrade talked to us about that ocean thing, what is it called? [people respond: "the aquarium"] The aquarium. He told us exactly what had been there before, and what they have there now. And what they are doing. I particularly liked that they planned for the future. We are going to have six times more than what we have now, and we are going to take care of it with double the number of workers. All these workers are doing this and that in response to the party.

Of course, it was the same thing raised by our comrade from Barlovento. What the party is doing there. The struggle it is involved in. How many problems it has solved in just a few months. How aware it is of what needs to be done there. How much progress has been made in regard to a number of reports. How even those workers who were subjected to a deforming policy are responding vigorously, enthusiastically.

We have seen excellent things. I feel that the talk by Comrade Marcos [Basic Industry Minister Marcos Lage] in connection with the proposals of the paper factory representatives was very good. He brought us good news—specific, substantive. They dispelled our doubts. They showed that we have to work now, we have to be alert now. We must not forget it. We are going to get Soviet machinery of excellent quality. The factory is going to be refurbished, brought up to date, and [words indistinct] production.

What problems do we have now? What are we going to do now in December? How many cables do we need? How soon can we get those cables? How are we going to obtain them for the power sector? What power problem do we solve in the short term? [Words indistinct] a year, a year and a half later.

He also explained to us how the problem of the floors is going to be solved. Of course, this cannot be done in 6 months because we would have to suspend operations in the factory and we can't do that. It produces too many paper articles that we need every day. Besides, we would have to replace them with imports, which would be really absurd. If we can solve all the problems of that old, 150-year-old factory, it would be great.

We were also told what was happening over at the brewery. What happened. Why there were delays. What were the subjective factors. What kind of irresponsibility was there, and what mistaken concepts. The minister explained these mistaken concepts. They were waiting for everything to come from the GDR, through a single channel. Reality shows that we can't (?solve) things that way.

We have the INSAC, the Automated Systems and Computer Technology Institute; everything involving that branch of electronics here. We have another center which was not mentioned as [word indistinct], but it is helping and can help solve those problems.

When we saw that at the assembly, we said, let's call our industry to see what can be done. Now they see everything in another light. How 80 percent of the parts must come from the socialist areas. How we had many stored around. How we have competent personnel capable of undertaking the task. How we have to prepare a workshop. How we have to spend around $150,000. It is not a frightsome figure, when you think of the large amount of breweries and when you also think that breweries bring in hundreds of millions of pesos in this country. They not only meet the public's need for refreshment and food. Beer is one the noblest of drinks. It has a low alcohol content. Don't be confused. When it says 12 percent, they are talking about a brewery's 12 percent, not 12 percent alcohol. Twelve percent means concentration of barley used. It does not mean 12 percent alcohol. It can have three to four; it's much less.

It has enormous importance. We have brought equipment in and brought the factory into line with the times. We have brought in new bottling equipment. It would be silly to lose capacity instead of expanding capacity, simply because we haven't been farsighted enough, because we haven't trained personnel, because we haven't created the conditions for the maintenance for this factory. But it was made clear here that this is being taken care of, that it will be taken care of.

I like to come to the assemblies, especially the municipal assemblies, because a lot gets (?accomplished). A lot. I heard things for the first time here from the comrade who presides over the grandparents' club, Felicia. She explained what they do. She really made us think, because when we were planning to bring back the minibrigades and a number of other ideas, the social minibrigades, and also the minibrigades working outside regular hours, the contingents, we had not considered that even children—the least likely people you would think—could also take part in production activities if well organized by their grandparents.

It is not a matter of what they produce but the educational experience it is for them! The educational experience. Here in the city, where we have so many anti-educational elements, and so many poor examples! Think what it means for a group of children, 12, 13, or 14 years old, engaged in construction, instead of hanging around with alienated individuals wasting their time! Imagine them pushing a wheelbarrow, realizing that they are helping build a childcare center, a family doctor's house, a doctor's office, a polyclinic. Think of the value in educational terms.

It was very interesting to hear how the grandparents have assisted the school in preventing absenteeism, and in convincing parents who were embarrassed to see a grandparent come up to them and tell them: hey, your kid is not going to school; this is not right, this is serious. Who knows how much we are contributing to the country's future internal order? Who knows how much we are helping to eradicate delinquency? We saw and felt it.

We feel that (Mitchell's) report explaining his mass methods was also fantastic, excellent. He explained that he discussed things with the workers so that instead of management, the workers themselves could analyze what was happening in each department, who was needed and who wasn't.

I found other reports excellent as well. I am sure that we could have heard 30 excellent reports. Thirty excellent reports! I am certain that in general everybody here could have raised interesting problems. And they were. You could see that there were plenty of things. Some people wanted to talk about the mid-level technicians, others wanted to talk about the training school. This in the area of education alone!

We could have listened to more reports on very interesting topics here.

That is why we decided to write everything down so we wouldn't miss anything. We are going to take note of the concerns so that if there is any problem, we can solve it. We don't want to leave anything unsolved because we don't know about it.

I feel that by following a good working method, we can make big strides in solving problems. One of the features of the party's work style should be to solve problems quickly. They should not let 3 months go by. I remember that San Miguel needed an ambulance. It was a problem. Well, there was an ambulance the next day. That was Sunday afternoon, and the next morning the ambulance was there. There are things that cannot be solved that quickly. The problems of the basic sciences and the schoolrooms for the comrades who are studying nursing here cannot be solved overnight. This problem will be solved when they finally have a nursing faculty.

But the discussion did bring to light that sometimes nursing students are not carefully selected. That should come out at the party's assembly, because the minister should be there. Those who are responsible for medical education should be there. Havana has seven faculties, or at least six medicine faculties, in addition to the basic sciences college. It seems to me that a policy should be establishered whereby if someone who doesn't make the grade is not selected, we can send him back. The selection of the student should not be left only to the hospital that sends him over because there might be some hospital that doesn't want to let go of a good cadre and selects a problem student instead.

Therefore, we must know who should have the power to decide who we take in, and who we don't.

It should make no difference whether it is a high school graduate who wants to start medical school right away, or a worker who is referred to us. That kind of thing cannot be allowed. The screening should be done right there.

That is why I say there are problems that cannot be solved immediately, but there are many that can be solved quickly, relatively quickly.